U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/81-23

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: October 4-7, 12-16, 19-21, and 26-30, 1981

Inspectors: B. L. Jorgensen for D. C. Boyd 11-23-81

J. K. Heller for D. C. Boyd 11-23-81

Approved By: D. C. Boyd, Chief, Reactor Projects Section 1A 11-23-81

Inspection Summary

Inspection during October 4-30, 1981 (Report No. 50-255/81-23)
Areas Inspected: Routine resident inspection program activities including: operations during long-term shutdown; refueling activities; maintenance and modifications; procedures; and followup of actions on NUREG-0737 items. The inspection involved a total of 160 inspector-hours onsite by two NRC inspectors, including 38 hours onsite during off-shifts.
Results: Of the five areas examined, no items of noncompliance or deviations were identified in three areas. Three items of noncompliance (Severity Level V - welding without fire extinguisher - Paragraph 2; Severity Level VI - liquid radwaste collection without procedure - Paragraph 2; Severity Level V - refueling procedure noncompliance - Paragraph 3) were identified in the remaining two 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
J. A. Meincke, Technical Engineer
W. L. Burmeister, Shift Technical Advisor
W. E. Drummond, Reactor Operator
R. S. Cater, Reactor Operator
S. Ghidotti, Shift Supervisor (SRO)
A. S. Kanicki, Shift Supervisor (SRO)
D. W. Kaupa, Shift Supervisor (SRO)
G. L. Pothoff, Reactor Operator
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)
D. P. Spry, Property Protection Advisor
J. L. McVay, Administrative Supervisor
W. M. Hodge, Plant Property Protection Supervisor
R. J. Stanton, Reactor Operator
D. M. Kennedy, General Engineer

*Denotes those present at Management Interview on November 3, 1981.

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

2. Activities During Long Term Shutdown

The inspector observed selected licensee activities being performed during the current shutdown condition to ascertain compliance to applicable requirements.

a. Control Room

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the month of October 1981. The inspector verified adherence to limiting conditions for operation at cold shutdown, proper shift manning, adherence to selected procedures, and instrument/recorder operations.

b. Facility Tours

Tours of the containment, turbine and auxiliary buildings, and plant grounds were conducted to: assess general plant/equipment conditions (including standby equipment); verify that maintenance requests have been initiated for equipment in need of maintenance; examine plant areas (including cabinet interiors) for fire hazards; and verify that ignition sources and flammable material being controlled in accordance with licensee procedures.

During a containment tour on October 5, 1981, the inspector observed a contractor preparing to weld piping in a fabrication area on the 649 foot level. The inspector asked the crew if they had a fire extinguisher readily available? The crew responded they would obtain a fire extinguisher prior to welding. The inspector returned to the area approximately 30 minutes later and observed the crew welding without a fire extinguisher present. At this point the inspector informed the crew that welding without a fire extinguisher readily available was a violation of the Fire Protection Implementing Procedures, and the crew stated they would obtain a fire extinguisher prior to continuing. The inspector then notified the Plant Property Protection Supervisor.

The inspector returned to the area within 30 minutes with the Property Protection Advisor, who noted a fire extinguisher was now present but the crew had vacated the area without stationing a fire watch to maintain surveillance for at least 30 minutes after the welding operation was completed. Failure to have a fire extinguisher readily available and failure to maintain a fire watch for at least 30 minutes after completion of welding is in violation of Palisades Fire Protection Implementing Procedure, Section 7, Paragraph 5.5.3. Adherence to this procedure is a requirement of Technical Specification 6.8.1.a. The above example constitues an item of noncompliance with the reference Technical Specification. Prior to completion of this inspection period, the licensee took the following corrective actions:

(1) Hot work operations were stopped on that shift until the crews were rebriefed on the Fire Protection Implementing procedures.

(2) Members of each subsequent shift were rebriefed prior to commencing work on their shift.

(3) The Property Protection Advisor will continue Fire Protection Implementing procedures briefing during General Employee Training.

The inspector has no further questions in this area.

The inspector observed plant housekeeping/cleanliness conditions and verified implemention of radiation protection controls. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with

the station security plan. The inspector independently surveyed one radwaste truck awaiting shipment. The inspector observed fire fighting training on October 15, 1981, for plant fire brigade members.

c. Review of Corrective Action

During a review of logs and event reports issued for 1981, the inspector noticed that the containment sump was drained by a method not recognized in SOP - 17B, Paragraph 6.10, the approved procedure for this function. The method used involved connecting a hose to the test tap between the automatic containment isolation valves and opening the tap valve and the inboard isolation valve to drain the sump. Event Report E-PAL-81-094 documented the licensee's concern that this lineup may have violated the intent of refueling Technical Specification 3.8.b, which requires that all automatic containment isolation valves be operable or at least one valve in each line be closed during fuel moves. Fuel was being moved while this temporary lineup existed. The inspector identified an additional concern, in that failure to have an approved procedure to drain the sump in the above manner, is a violation of Technical Specification 6.8.1.a which, by reference to Regulatory Guide 1.33 requires approved procedures for collection of liquid radioactive wastes.

Two items of noncompliance and no deviations were identified in this area.

3. Refueling Activities

The inspector examined the periodic testing of refueling related equipment; observed four shifts of the fuel handling operations (removal and insertion) and verified the activities were performed in accordance with the Technical Specifications and approved procedures; verified that good housekeeping was maintained on the refueling area; and, verified that staffing during refueling was in accordance with Technical Specifications and approved procedures.

During source transfer on October 5, 1981, the inspector observed a violation of SOP-28, paragraph 3.1 which requires the spent fuel pool elevator, two-speed gear box shall be mechanically restricted to prevent any gear changes when a fuel bundle is in the elevator. Source transfer requires use of the spent fuel pool elevator to raise or lower the fuel bundle while transferring the source. The inspector observed an operator place an irradiated fuel bundle in the elevator, raise the elevator in slow speed and lower the elevator in fast speed. The individual was asked if he had shifted gears,which he answered in the affirmative. The inspector searched the area and could not find evidence that the gear box had been mechanically restricted. The inspector then notified the Shift Supervisor, Technical Engineer and the Operations Superintendent. Failure to have the gearbox mechanically restricted and shifting gears with a fuel bundle in the elevator is in violation of SOP-28, Parapgraph 3.1. Adherence to this procedure is a

requirement of Technical Specification 6.8.1.b. The above example constitutes an item of noncompliance with the referenced Technical Specification. Prior to completion of the inspection period the licensee undertook the following corrective actions:

a. Instructed operators during subsequent source handling operations of restrictions in SOP-28.

b. Mechanically restricted the two-speed gear box.

c. Added a requirement to the fuel elevator check sheet to require a caution tag to be installed on the mechnical gear restrictor.

d. Instructed the operator involved.

e. Routed memo to all Operations Department personnel explaining the reason why the gear box cannot be shifted when a bundle is in the elevator.

The inspector has no further questions in this area.

Several completed procedures/checklists associated with fuel movement were reviewed. The results of this review are listed below:

a. CL 28.1 Refueling Communication Checklist:

An operator had initialed, on 9 of 35 checklists reviewed, that headphones conference was in use, whereas the other operators N/A this signoff on 26/35 checklist reviewed. This item was discussed with the operation supervisor.

b. CL 28.4 Refueling Machine Checklist:

The checklist does not contain a signoff for "supervisor review" or for "completed by" and does not signify how many pages the checklist contains. This item was discussed with the operation supervisor and appropriate changes made to the procedure.

c. GCL 11.2 Refueling Operation Checklist:

(1) Step 11 requires a shiftwise signoff verifying proper configuration of the equipment hatch and personnel hatch. This was not performed as required during all shifts of fuel transfer.

(2) Step 12 requires greasing of the tilt machine hydraulic pump crank bearing every 24 hours of operations. This was only signed once during the approximately 11 days of fuel shuffling.

(3) Step 13 requires the elevator checklist FHSO-1 be completed each shift the elevator was used. This was not signed at any time during use of the elevator. The inspector did search the spent fuel pool area and found a copy of FSHO-1. Review of

FSHO-1 shows that the checklist was not completed each shift the elevator was used.

(4) Step 11 addresses proper verification of the personnel hatch and equipment hatch but does not require verification of the escape hatch.

(5) All items were discussed with the operation supervisor and operation superindent.

GOP-11, Step 3.2 requires completion of CL 11.2 during each shift of fuel transfer. Adherence to GOP-11 is a requirement of Technical Specification 6.8.1.b., Items 1, 2, and 3 above are examples of non-compliance to the referenced Technical Specification.

d. Checklists 28.2, 28.3, 28.5, 11.1, 3.3 and 27.2 were reviewed and no items identified.

The two problems identified; failure to mechanically restrict the fuel pool elevator and failure to complete GCL 11.2 are treated as one non-compliance with two examples. No deviations were identified.

4. Maintenance and Modifications

The inspectors observed work activities involving maintenance or modifications of plant systems or components. These observations were conducted to verify proper exercise of administrative controls over these activities including: approvals for removal from and return to service; provision of appropriate QC hold points; provisions for testing following work; control of parts and materials used; management of any identified deficiencies, and; general housekeeping and cleanliness controls. The inspector selectively verified activities were accomplished by qualified personnel using approved procedures.

a. Station battery replacement: the licensee identified battery rack welding deficiencies traceable to the manufacturer and initiated corrective action which may include a report under 10 CFR 21.

b. Shutdown cooling system: replacement of damaged check valves; installation of check valve integrity testing connections.

c. Auxiliary feedwater system: welding activities.

d. Reactor vessel gaseous vent: fabrication and installation activities.

e. Safety injection accumulators: wiring connections; installation and restraint of motor control centers outside containment for accumulator outlet valve motor-breakers.

f. Control rod drive connector repair.

The inspector received notification from a contractor employee on October 5, 1981, that a knife blade in use at an electrical jobsite had broken and been lost inside a safety-related electrical conduit. The employee was concerned no action would be taken to report this matter to the licensee for corrective action. The matter was discussed with a licensee representative, who determined the contractor had documented the occurrence for reporting to the licensee. Corrective action was initiated to assure the subject conduit would not be further utilized in a manner (such as cable pulling) which could result in damage from the lost blade.

No items of noncompliance or deviations were identified.

5. Procedures

Selected licensee procedures were examined during this inspection to determine technical adequacy; consistency to license requirements; and proper development, review, approval, and revision. Variously located controlled copies of the procedures were verified to have the latest revisions posted.

a. Systems Operating Procedures (SOP's)

(1) SOP-3 Safety Injection and Shutdown Cooling System

(2) SOP-5 Containment Air Cooling and Hydrogen Recombining System

(3) SOP-8 Main Turbine and Generator Systems

(4) SOP-21 Fire Protection System

b. Emergency Operating Procedures (EOP's)

(1) EOP-6 Main Steam Line Break/Main Feedwater

(2) EOP-10 Control Room Evacuation

c. Off Normal Procedures (ONP's)

(1) ONP-3 Loss of Feedwater

(2) ONP-4 Containment Isolation

d. Administrative Procedure 9.0: Plant Modifications

e. Procedure CFHO-6: Replacement of Damaged Control Rod

The reviews of the EOP's was accomplished utilizing NUREG/CR-2005, "Checklist for Evaluating Emergency Procedures Used in Nuclear Power Plants." Some minor inconsistencies between the EOP's and the NUREG/CR-2005 were noted in the review which were identified to the licensee for his information.

No items of noncompliance or deviations were identified.

6. NUREG-0737 Followup

The inspection included a review of selected licensee actions to implement requirements of NUREG-0737, "Clarification of TMI Action Plan Requirements."

a. (Closed) Item I.C.5, "Feedback of Operating Experience." Licensee actions as described in his letter of December 19, 1980, and September 28, 1981, were verified and deemed appropriate.

b. (Closed) Item II.B.4, "Training for Mitigating Core Damage." Implementation and completion of the licensee's training program for this subject, as described in his letters dated December 19, 1980, and September 28, 1981, was examined. Some Shift Technical Advisors (STA's) completed training after October 1, 1981, but before performing on actual STA duties. As noted in the licensee's letter of December 19, 1980, all topics of Enclosure 3 to the March 28, 1980, NRC letter (H. R. Denton to All Power Reactor Licensees) on this subject were not covered in detail. The inspection, however, noted only very minor variances, and concluded proper training was provided.

c. (Closed) Approved Technical Specification Changes covering the following were received with Ammendment 67 dated October 8, 1981:

(1) Item I.A.1.1.2 Shift Technical Advisor

(2) Item I.A.1.3.2.B Shift Manning

(3) Item II.D.3.2 Valve Position Indication

(4) Item II.E.1.2.2.B Auxiliary Feedwater System Initiation and Flow

(5) Item II.E.3.1.2 Emergency Power for Pressurizer Heaters

(6) Item II.F.2.2 Instrumentation for Detection of Inadequate Core Cooling

(7) Item II.G.1.2 Power Supplies for Pressurizer Relief Valves, Black Valves, and Level Indicators

(8) Item III.D.1.1.2 Primary Coolant Outside Containment

(9) Item III.D.3.3 Inplant Radiation Monitoring

Ammendment 67 included an accompanying Safety Evaluation which addressed Item II.E.4.2, "Containment Isolation Dependability;" concluding changes to the existing Technical Specifications were not required for this item.

No items of noncompliance or deviations were identified.

7. Contractor Employee Complaints

The inspectors received complaints from two contractor employees during the inspection period. One individual expressed concerns relating both to occupational safety questions and to licensee adherence to radiation protection procedure requirements. Some review of these matters was performed and discussions were held with licensee representatives (Safety Committee Chairman and health physicist) to apprise them of the concerns. The other individual expressed a separate and different concern relating to radiation protection practice. This matter and those of the first individual relating to radiation protection were discussed with and referred to specialists in the NRC Region III Office of Inspection and Enforcement for final review during a future inspection.

8. Management Interview

A management interview, attended as indicated in Paragraph 1, was conducted following completion of the inspection, on November 3, 1981. The following matters were discussed:

a. The inspectors summarized the scope and content of the inspection as described in these Details.

b. The apparent items of noncompliance were specifically discussed by the inspectors, including the determination that appropriate corrective and preventive actions had been completed for the item involving welding without a fire extinquisher available.

c. The licensee indicated corrective and preventive actions were considered complete for the item involving fuel inspection elevator gear changing, and requested inspector review of the matter. The inspectors subsequent review determined proper licensee actions had been completed.

d. Preliminary review and referral of complaints covering radiation protection and occupational safety concerns, submitted to the inspectors by workmen, were discussed.