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

REGION III

Report No. 50-255/81-06

Docket No. 50-255

Licensee: Consumers Power Company 212 West Michigan Avenue Jackson, MI 49201

Facility Name: Palisades Nuclear Generating Plant

Inspection At: Covert, MI

Inspection Conducted: April 1-4, 6-10, 12-17, 20-24, 26-30, and May 1-2, 1981

Inspectors: B. L. Jorgensen Knog for 5-19-81 J. K. Heller Knog for D. C. Boyd, Chief 5-19-8/ Approved By: Reactor Projects Section 1A

Inspection Summary

Inspection during April 1-4, 6-10, 12-17, 20-24, 26-30, and May 1-2, 1981 (Report No. 50-255/81-06)

<u>Areas Inspected:</u> Augmented resident inspection program activities including operations; surveillance; maintenance; reportable events; IE Bulletins; spent fuel pool modifications; and independent reviews. The inspection involved a total of 172 inspector-hours by 2 NRC inspectors including 58 inspector-hours onsite during off-shift hours.

<u>Results:</u> Of the seven areas inspected, no items of noncompliance were identified in five areas. Two noncompliances were identified in the other two areas.

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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
- *A. D. Kowalczuk, Chemistry/Health Physics Superintendent
- *R. E. McCaleb, Quality Assurance Administrator
- *W. P. Mullins, Plant Health Physicist
- W. S. Skibitsky, Operations Superintendent
- G. W. Ford, Senior Engineer (STA)
- A. F. Brookhouse, Shift Supervisor
- S. Ghidotti, Shift Supervisor
- A. S. Kanicki, Shift Supervisor
- D. W. Kaupa, Shift Supervisor
- E. I. Thompson, Shift Supervisor
- E. Polk, Assistant Mechanical Maintenance Supervisor
- S. F. Pierce, Radioactive Materials Control Supervisor
- W. M. Hodge, Property Protection Superintendent
- K. M. Farr, Public Affairs Director

*Denotes those present at Management Interview on May 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 April, 1981. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of auxiliary and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fire extinguisher verified operable and in place, 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. Tours of the security fence were conducted.

During a tour of the auxiliary building (spent fuel pool area) on May 29, 1981, at approximately 1930 hours, the inspector found a bottle of methyl alcohol on the new fuel elevator. Section 7, paragraph 5.4.1.a and paragraph 5.4.2.b of the Palisades Fire Implementing Procedure classifies methyl alcohol as a Class I liquid and requires metal containers or safety cans for storage and handling of all class I liquids. This item was discussed with

the shift supervisor who took appropriate action to assure compliance with the Fire Protection Implementing Procedures. The methyl alcohol was apparently staged for work being performed on the new fuel elevator. The inspector verified, during subsequent tours of the spent fuel pool area, adherence to the Fire Protection Implementing Procedures when a class I liquid was on the job site. Establishment, maintenance, and implementation of the Fire Protection Implementing Procedure is a requirement of Technical Specification 6.8.1.d. Failure to implement the Fire Protection Implementing Procedure as described above is deemed to constitute an item of noncompliance with Technical Specification 6.8.1.d.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the month of April 1981, the inspector walked down the accessible portions of the service water system and the electrical portion of MO-29. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipment and barreling. Two radwaste trucks awaiting shipment were independently surveyed on April 8 and April 28. These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under Technical Specifications, 10 CFR, and administrative procedures.

The plant operated at essentially full power throughout the month of April 1981, under the provisions of an NRC Confirmatory Order dated March 10, 1981. The plant has incorporated all items of paragraph V.A.2 of the NRC Confirmatory Order dated March 10, 1981 into chapter 18.1, "Procedure Development" of the Palisades Administrative Procedures.

One item of noncompliance was 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 Maintenance Order packages were reviewed:

- a. 81-EPS-026 Rebuild emergency diesel air-start motor
- b. 81-EPS-022 Quarterly emergency diesel air-start system preventive maintenance
- c. 81-CVC-016 Recharging "B" charging pump discharge accumulator
- d. 81-WAS-006 Replace inlet gasket on RV-1160
- e. 81-VAS-025 Replace solenoid coil on CV-1810

- f. 81-VAS-006 Reconnect damper/stem and recalibrate CV-1804
- g. 81-SWS-006 Repair service water pressure sensing line on EDG 1-2
- h. 81-SWS-002 Repack "A" service water pump
- i. 81-RPS-001 Repair/readjustment of "C" TM/LP trip channel
- j. 80-CVC-189 Replace studs and gasket on letdown heat exchanger

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.

Minor administrative and recordkeeping incongruities were noted in the review, including two packages without prior Quality Control group review, one package for which a referenced Equipment Outage Request (EOR) was not attached, and one package for which the work performed may have been beyond the scope of the Maintenance Order. Further, as identified in a previous inspection¹/, one activity was apparently performed without Shift Supervisor notification and authorization. Again, this activity did not render components inoperable or otherwise change their status. The above items were discussed at the management interview, and Shift Supervisor notification criteria for maintenance activities not affecting equipment remains an open item.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were observed:

- a. Emergency Diesel Generator 1-2 oil leak repair
- b. Spent Fuel Pool rack removal and decontamination
- c. Preventive maintenance on the fuel handling crane
- d. Pipe lagging on the critical service water header
- e. Verified proper use of a fire watch during welding of a hand rail in the turbine building

- 4 -

Following completion of maintenance on the above systems, the inspector verified that these systems had been returned to service properly.

1/ IE Inspection Report No. 50-255/81-05

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 also witnessed portions of the following test activities:

- a. MO-7B Fire Water Pumps (P-10B only)
- b. MO-24 Auxiliary Feedwater System: Inservice Test Procedure
- c. MC-11 Safeguards Boron Sample (S.I. bottles only)
- d. Q0-05 Valve Test Procedure (Includes Containment Isolation Valves)

Completed data for several tests performed in March 1981, and April 1981 were reviewed. The results of this review are listed below.

March, 1981

- a. MC-11 Safeguards Boron Samples The Shift Supervisor did not sign step 5.2.14 of Temporary Change 81-090 for MC-11.
- b. MO-16 Inservice Test Procedure-Service Water Pumps The pump discharge pressure for P-7A is miscalculated. (Math error) The pressure test evaluation acceptable range was filled out incorrectly. Both items are contained in attachment 1 to MO-16. Neither item affected operability of the pump.

April, 1981

- a. MO-23 Inservice Test Procedure Low Pressure Safety Injection Pumps Step 3.6.1 and step 7.3 of MO-23 requires attachment of a calibration data sheet for the point 504 data logger, but the calibration data sheet was not attached to MO-23.
- MO-19 Inservice Test Procedure Containment Spray Pumps Step 3.6.1 and step 7.4 of MO-19 requires attachment of a calibration data sheet for FI-0404A if the point 504 data logger is not in service. The data logger was not in service at the time of the test, but a calibration data sheet for FI-0404A was not attached to MO-19.

- c. MO-7A Emergency Diesel Step 6.5 of MO-7A implies that a maintenance order should be initiated when the difference between diesel generator loaded cylinder exhaust temperature exceeds 100°F, but this was not performed when the loaded cylinder exhaust temperature for diesel generator 1-1 exceeded 100°F.
- d. MC-11 Safeguards Boron Samples Step 5.2.14 of Temporary Change 81-090 for MC-11 requires a signature showing that the Shift Supervisor and Chemistry Supervisor directly supervised performance of this section. These signatures were not made, but signoffs were made implying a supervisor directly supervised performance of three sections of MC-11 that were not performed.

The completed procedures listed above had gone through several levels of review and the items listed above had not been identified by the licensee as discrepancies. The discrepancies listed above and in other reports $\frac{2}{3}$, $\frac{4}{4}$, are evidence that the plant lacks an effective review process in this area. The plant should examine their review mechanisms and provide additional guidance in this area. These items were discussed with licensee personnel at the monthly exit interview.

No items of noncompliance or deviations were identified.

5. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.

- a. (Closed) LER 79-40 "Crack in Feedwater to Steam Generator Nozzle" See Inspection Report 50-255/80-15.
- b. (Closed) LER 80-043 "Excessive Leakage Through Component Cooling Water (CCW) Supply Penetration". During valve inservice testing the measured leakage through containment penetration #14 (CCW supply to containment) exceeded allowable limits. The containment penetration consists of a checkvalve and a butterfly valve. Acceptable leakage was obtained by replacing the checkvalve and repairing the seat to the butterfly valve.
- c. (Closed) LER 80-044 "Stud Corrosion in the letdown Heat Exchanger." While investigating a leak at the return head flange of the letdown heat exchanger the licensee noted that the closure head fasteners were corroded. Stud corrosion was caused by contact with borated water which leaked from the flange. The leak was

2/ IE Inspection Report No. 50-255/80-20 3/ IE Inspection Report No. 50-255/80-24 4/ IE Inspection Report No. 50-255/81-05

- 6 -



repaired by disassembly of the head, replacement of the damaged studs and gasket, and reassembly of the head. The leakage apparently resulted from improper assembly of the closure head.

- d. (Closed) LER 80-45 "Low Condensate Makeup Inventory" The licensee reported that for approximately twenty minutes the auxiliary feedwater makeup inventory fell below the 100,000 gallons of water required by the Palisades Technical Specification. The decreased inventory was caused by non-availability of the makeup demineralizers, and loss of approximately 300,000 gallons of water due to high sodium content, and makeup demands required during plant startup.
- e. (Closed) LER 81-005 "Inoperable Diesel Generator due to contractor workman actions." Diesel generator 1-2 was made inoperable to repair a damaged copper tubing to the dieselgenerator service water low pressure alarm. The copper tubing was accidently damaged when a contractor workman accidently bumped the tubing. The copper tubing was repaired and the diesel generator returned to service within the time limits of the Technical Specifications. See (f) for corrective action.
- f. (Closed) LER 81-007 "Inoperable Auxiliary Feedwater Pump due to contractor workman actions." An auxiliary operator discovered that the overspeed trip device for the turbine-driven auxiliary feedwater pump was in the tripped condition. The operator restored the pump to operability by resetting the overspeed trip. The condition is believed to have existed for one hour. The plant believes the overspeed trip device was accidently bumped by a contractor worker who was in the auxiliary feedwater pump room an hour before the discovery. The plant has revised indoctrination training for contractor workers to stress necessity to exercise caution when working in vital areas and added a weekly contractor meeting to schedule/control the activities of contractor workers.

6. <u>IE Bulletin Followup</u>

For the IE Bulletin 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. IE Bulletin 80-10, "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment." The inspector verified the only item remaining open following a previous inspection⁵/ (addition
- 5/ IE Inspection Report No. 50-255/81-05

of service air system to routine sampling program) had been implemented. The system remains free of contamination. This item is closed.

No items of noncompliance or deviations were identified.

7. Spent Fuel Pool Modifications

During this inspection, activities relating to completion of a facility modification involving replacement of the original spent fuel storage racks with new high-density storage racks were observed/ reviewed. Portions of this activity were previously examined⁶/ before work was suspended to accomplish the most recent refueling and other activities.

This inspection included examination of a new rack for proper venting (Reference Part 21, Report 78-051); observation of new rack cleaning, handling and installation; and observation of rack alignment and seismic securing using a diver.

Final documentation review will be completed during a future inspection.

No items of noncompliance or deviations were identified.

8. Independent Review

On May 1, 1981, the inspector received information that contaminated materials had been stored in the onsite overflow parking lot - an unrestricted area. Independent surveys of the area were immediately performed using an NRC - owned radiation detection instrument, and two 55-gallon drums were identified which showed above normal radiation levels. The licensee's health physics staff was contacted and accompanied to the area for verification using their instrumentation. The above-background readings on two barrels were confirmed, so the barrels were immediately returned to the licensee's restricted area. Subsequently, comprehensive surveys of the area and stored materials (by the licensee) identified two additional items, both 55-gallon barrels, which also showed above-background radiation levels and which were, therefore, immediately returned to the licensee's restricted area.

Radiation levels from these barrels were low in each case; well below the levels established as regulatory limits for radiation levels in unrestricted areas. Contamination on three of the barrels could be characterized as trace amounts. One barrel, however, contained quantifiable activity (approximately 4.3 microcuries, primarily Cs-137) contained in about three liters of water in the barrel.

The overflow parking lot is a fenced area which is normally unattended and which was found unattended on May 1, 1981, with the area gate open.

6/ IE Inspection Report No. 50-255/79-05

Title 10, Code of Federal Regulations, Part 20.207 prohibits storage of licensed materials in unrestricted areas unless attended or secured from unauthorized removal. Storage of licensed material in the form of contaminated containers as described above is an item of noncompliance with 10 CFR 20.207.

9. Management Interview

A management interview (attended as indicated in Paragraph 1) was conducted after the conclusion of the inspection, on May 4, 1981. The following items were discussed with licensee response as indicated.

- a. The scope and findings of the inspection were summarized.
- b. The two instances of apparent noncompliance were specifically identified and discussed. The licensee briefly described existing systems for processing and control of company-owned materials such as those stored in the onsite overflow parking lot. (Paragraphs 2 and 8)
- c. Preliminary licensee evaluations concerning how and when contaminated materials may have been placed in storage in the overflow parking lot were discussed.
- d. Incongruities identified in maintenance package review were identified. (Paragraph 3)
- e. Examples of errors and omissions identified in completed surveillance package review were stated, with the inspectors expressing concern for the apparent weakness of the licensee's earlier reviews. (Paragraph 4)
- f. IE Bulletins and Licensee Event Reports to be closed on the basis of reviews conducted during this inspection were identified. (Paragraphs 5 and 6)