

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

REGION III

Report No. 50-255/80-10

Docket No. 50-255

License No. DPR-20

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

Facility Name: Palisades

Inspection At: Covert, MI

Inspection Conducted: June 2-6, 9-12, 16-21, 23-27 and 30, 1980

Inspectors: *DL Boyd*
for B. L. Jorgensen

7-17-80

DL Boyd
for J. K. Heller

7-17-80

Approved By: *DL Boyd*
D. C. Boyd, Chief
Projects Section 4

7-17-80

Inspection Summary

Inspection during June, 1980 (Report No. 050-255/80-10)

Areas Inspected: Routine Resident Inspection Program activities for June, 1980, including: reportable events; IE Circulars; operational safety and plant operations review; surveillance, maintenance, and reactor physics. The inspection comprised 170 onsite inspection hours by two NRC inspectors.

Results: Of the seven areas inspected, no items of noncompliance or deviations were identified in six areas. One deviation (failure to man control room with two licensed personnel) was identified in the remaining area.

DETAILS

1. Persons Contacted

J. G. Lewis, General Manager - Palisades
*H. W. Keiser, Operations and Maintenance Superintendent
*H. J. Palmer, Technical Superintendent
*W. S. Skibitsky, Operations Superintendent
*G. H. R. Petitjean, Technical Engineer
J. A. Meincke, Technical Engineer/Reactor Engineer
*C. W. Gilmor, Maintenance Superintendent
*R. E. McCalib, Quality Assurance Superintendent
*G. D. Gilboday, Quality Assurance Engineer
F. G. Butler, Senior Engineer
W. E. Adams, General Engineer
W. E. Burmeister, General Engineer
D. M. Kennedy, Associate Engineer
S. F. Pierce, Radioactive Materials Control Supervisor
D. W. Langschwager, Shift Supervisor
E. I. Thompson, Shift Supervisor
S. Gludotti, Shift Supervisor
A. S. Kanicki, Shift Supervisor
D. H. McBride, Chemistry/Radiation Protection Technician

Numerous other members of the operations, technical, radiation protection and administrative staffs were also contacted briefly.

*Denotes those present at management interview June 30, 1980.

2. 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.

LER 80-06 "Containment Purge Valves Air Suppliers Had Leakage in Excess of Acceptance Criteria." The air suppliers to the 12 inch and 48 inch purge valves had leakage in excess of allowable limits. The 48 inch purge valves were blanked off and the air suppliers to the 12 inch purge valves were repaired prior to startup. This item is closed.

LER 80-10 "Improper Calibration of Safety Injection and Refueling Water (SIRW) Tank Low Level Switches." The licensee identified that the procedure for calibration of the SIRW Tank low level switches was in error. The error would

have resulted in approximately 1% less water injected during a LOCA. The procedure was rewritten and switches reset prior to startup. This item is closed.

LER 80-11 "Power Operated Relief Valves (PORV) Improperly Declared Operable." The PORV's were declared operable after completing modification of the PORV's power supply and pre-operational test but prior to completing the administrative review of the modification package. A review of the modification package was satisfactorily completed and the PORV's were again declared operable. Plant management involved were briefed in the administrative requirements for returning safety related equipment to service. This item is closed.

No items of noncompliance or deviations were identified.

3. IE Circular Followup

For the IE Circulars listed below, the inspector verified that the Circular was received by the licensee management, that a review for applicability was performed, and that if the circular were applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

IE Circular 78-15 "Tilting Disk Check Valves Fail to Close with Gravity in Vertical Position."

IE Circular 79-02 "Failure of 120 Volt Vital AC Power Supplies." IE Circular 79-02 was superseded by IE Bulletin 79-22 (Closed in Inspection Report 80-08) and confirmatory order to Palisades operating license dated April 25, 1980 (Closed in Inspection Report 80-08).

IE Circular 79-04 "Loose Locking Nut on Limitorque Valve Operator."

IE Circular 79-12 "Potential Diesel Generator Turbocharger Problem."

IE Circular 79-15 "Bursting of High Pressure Hose and Malfunction of Relief Valves "O" Ring in Certain Self-Contained Breathing Apparatus."

IE Circular 79-18 "Proper Installation of Target Rock Safety-Relief Valves."

IE Circular 79-19 "Loose Locking Devices on Ingersoll-Rand Pump Impellers."

IE Circular 79-20 "Failure of GTE Sylvania Relay, Type P.M. Bulletin 7305, Catalog 5V12-11-ac with a 120V AC Coil."

IE Circular 79-22 "Stroke Time for Power Operated Relief Valves."

IE Circular 79-23 "Motor Starters and Contactors Failed to Operate."

No items of noncompliance or deviations were identified.

4. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the month of June, 1980. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of selected building areas 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 direct observation verified that portions of the physical security plan were being properly implemented.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. The inspector walked down parts of the accessible portions of the safety injection and containment spray systems on June 21 to verify operability.

The inspector also witnessed portions of the radioactive waste system product testing from the new light-concrete liquid solidification system, prior to actual waste shipment. Waste containers of varying "age" were examined with licensee personnel, each showing incomplete solidification. No solidified liquid wastes have been or are being shipped. The licensee is continuing his evaluations.

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 Administrative Procedures, in a recent revision, discuss routine and emergency responsibilities of the newly-established position of Shift Technical Advisor (STA). Routine responsibilities include a weekly review of the Caution Tag Logbook. It was unclear from examination of the STA Logbook that this activity is being adequately implemented. This matter was discussed at the management interview and will be examined further during a future inspection. It is currently considered an Unresolved Item.

On entering the control room area at approximately Noon on June 30, 1980, the inspector observed the control room briefly attended by only one licensed control operator. The licensee had committed in his letter of August 2, 1979, in response to IE Bulletin 79-06C, to implement Bulletin action Item 1. This included maintaining at least two licensed operators in the control room at all times during plant operation. Failure to maintain two licensed operators in the control room for a brief time on June 30 is a Deviation from this commitment.

No items of noncompliance were identified.

5. Review of Plant Operations

During the months of April thru June, 1980, the inspector reviewed the following activities:

a. Procurement

The inspector reviewed procurement and storage activities to ascertain whether the purchase of components, materials and supplies used for safety related functions, is in conformance with the licensee's approved QA program and implementing procedures; nonconforming items are segregated and marked accordingly; applicable preventive maintenance is performed; house-keeping and environmental requirements are met; and, limited shelf-life items are controlled.

The following components were inspected:

- (1) H. Vogt: 3/4" disc valves
- (2) Bergen-Patterson: accumulator springs
- (3) Detroit Ballbearing: retaining ring
- (4) Victoreen: meter assembly and bracket
- (5) Limitorque: 1/2 HP motor
- (6) Socketweld unions

b. Review and Audits

The inspector attended two special Plant Review Committee (PRC) onsite review meetings. Membership, frequency, and discussion topics were as provided for in Technical Specifications. Review of PRC minutes^{1/} for numerous other meetings is discussed in a previous report^{1/}.

Portions of a QA Department surveillance (audit) covering training activities were witnessed. The inspector verified

^{1/} IE Inspection Report No. 050-255/80-08

a report was prepared and provided to management concerning this surveillance.

c. Training

Employee fire-protection/firefighting training was witnessed, in part, by the inspector. Licensed operator training, specifically as it addressed Small-Break Loss of Coolant Accidents, was also^{2/} examined and has been discussed in previous inspection reports^{2/}.

d. Emergency Preparedness

Operability and licensee testing of the emergency warning sirens and communications systems was observed. A practical application of the preparedness plans was witnessed on May 30, 1980, when severe weather conditions, including tornado warnings, occurred.

e. Corrective Action

Licensee corrective action program documentation was selectively reviewed for trends, recurrent failures, and proper resolution of identified discrepancies.

No items of noncompliance or deviations were identified.

6. Monthly Surveillance Observation

The inspector observed selected technical specifications required surveillance testing or portions thereof and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that test results conformed with requirements and were properly reviewed, and that identified deficiencies were resolved.

- a. Control rod exercising
- b. Power-dependent and pre-power-dependent rod insertion limit verification
- c. Boronmeter calibration
- d. Radiation area monitor operability checks
- e. MO-29 Monthly Technical Specification limiting conditions for operation verification (This is a new activity being conducted pursuant to the NRC Order on License DPR-20 dated November 9, 1979.) Minor deficiencies identified during the conduct of

^{2/} IE Inspection Report No. 050-255/80-06 and 050-255/80-08

MO-29 included two unsecured valves and two valves with chain operators secured such that considerable operation remained possible. These matters were discussed at the management interview.

No items of noncompliance or deviations were identified.

7. 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; 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.

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/reviewed:

- a. Concentrated boric acid recirculation valve CV-2136
- b. Charging pump P-55A
- c. Diesel K6A

A concern relating to adequacy of controls over routine preventive maintenance on the emergency diesel-generators was developed. In each of the two most recent maintenance activities involving fuel oil filter changeout on EDG1-1, the system was improperly reassembled. Both problems were discovered after the unit was released from the Maintenance Department to the Operations Department for testing. In each case, the down time of the diesel-generator had to be extended to correct the initial error. The preventative maintenance activities are not proceduralized other than by reference to the manufacturer's manual. The licensee does not consider further proceduralization necessary. These activities will be routinely reviewed during future inspections.

A concern was also identified related to an operating configuration for the concentrated boric acid system (permitted by the Technical

Specifications) which does not appear to assure protection against single-failure conditions. This matter will be referred to the Office of Nuclear Reactor Regulation.

No items of noncompliance or deviations were identified.

8. Moderator Temperature Coefficient

The inspector reviewed the results of the testing performed to determine the value of the Moderator Temperature Coefficient as described in Palisades Procedure T-121, Revision 0₃, dated January 8, 1980. The measured value was -1.98 ± 1 (times 10^{-3}) P/°F with all rods out and -9.72 ± 1 (times 10^{-5}) P/°F with 4 of 7 control rod groups diluted in the results were within the allowable Technical Specification limits and in agreement with predicted values supplied by the fuel manufacturer (Exxon) in report number XN-FN-79-9(P).

Additional tests^{3/} performed during reactor startup will be reviewed and documented in a future report.

No items of noncompliance or deviations were identified.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, Items of Noncompliance, or Deviations. An unresolved item developed during this inspection as discussed in Paragraph 4.

10. Management Interview

A management interview was conducted at the conclusion of the inspection on June 30, 1980. Licensee personnel attended as indicated in Paragraph 1 above. The inspection scope and findings were summarized with the following specifically discussed:

- a. The licensee's failure to continuously maintain two licensed operators in the control room was discussed. (Paragraph 4)
- b. Inspector concerns relating to the quality of maintenance on the emergency diesel-generators were stated. A discussion involving reportability of personnel errors potentially affecting equipment already intentionally out-of-service ensued. (A subsequent consultation with NRC Region III personnel indicated such matters do not currently require reporting and the licensee was so informed). (Paragraph 7)

^{3/} Inspection Report No. 050-255/80-08

- c. Routine Shift Technical Advisor (STA) program implementation was discussed, including inspector concerns relating to STA routine review of the Caution Tag Logbook being incompletely implemented. The licensee stated additional attention will be given to this area. (Paragraph 4)
- d. Minor deficiencies identified during conduct of MO-29 were stated by the inspector. (Paragraph 6)
- e. The licensee was advised concerning the permissible operating mode of the concentrated boric acid system which appears subject to single-failure analysis, preventing boric acid injection under accident conditions. (Paragraph 7)