

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/85006(DRS)

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: Covert, MI and Jackson, MI

Inspection Conducted: May 13-17 and 30-31, 1985

Inspectors: *RA Westberg*
R. A. Westberg

6/19/85

Date

Hand for
W. J. Kropp

6/19/85

Date

Hand for
S. M. Goldberg

6/19/85

Date

Approved By: *Hand*
F. Hawkins, Chief
Quality Assurance Programs Section

6/19/85

Date

Inspection Summary

Inspection on May 13-17, and 30-31, 1985 (Report No. 50-255/85006(DRS))

Areas Inspected: Special unannounced inspection by regional and headquarters inspectors of procurement activities. The inspection involved a total of 101 inspector-hours onsite and 6 inspector-hours at the corporate headquarters.

Results: No violations or deviations were identified.

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DETAILS

1. Persons Contacted

Consumers Power Company (CPCo)

- *H. M. Esch, Administrative Manager
- *D. G. Malone, Senior Engineer, Licensing
- *R. E. McCabe, Quality Assurance Director
- J. G. Lewis, Licensing
- *R. M. Rice, Operations Manager
- *F. A. Dziedzic, Material Service/Maintenance Superintendent
- J. D. Alderink, Mechanical Engineering and Maintenance Superintendent
- *E. Huss, Material Service Supervisor
- *L. Schuster, Section Head - Audits
- *T. J. Palmisano, Plant Projects Superintendent
- C. D. Ward, Engineering Analyst
- M. R. Konkle, Quality Assurance Analyst

USNRC

E. R. Swanson, Senior Resident Inspector

Other personnel were contacted as a matter of routine during the inspection.

*Indicates those attending the exit meeting on May 17, 1985.

2. Procurement Control

This report documents the results of the special procurement inspection at the Palisades Nuclear Generating Plant. It was conducted as part of the NRC task force's review of commercial grade purchasing by the nuclear industry. The inspection concentrated on equipment failures potentially caused by procurement practices.

a. Documents Reviewed

- (1) CPC-2A, "Quality Assurance Program Description for Operational Nuclear Power Plants", Revision 1.
- (2) NADP IV-1, "Procurement Specification and Document Review", Revision 9.
- (3) 10.02, "Procurement Process - General", Revision 1.
- (4) 10.03, "Procurement of Materials", Revision 1.
- (5) 10.07, "Noncertified Q-Listed Material", Revision 1.
- (6) 10.01, "Material Control", Revision 1.
- (7) 10.11, "Control of Nonconforming Material", Revision 2.

b. Results of Inspection

Prior to the site visit, event reports from 1983, 1984, and 1985 were reviewed. This research produced eleven equipment failures that had the potential to be caused by procurement practices. After arriving on-site, specific documentation of the events was examined. One Licensee Event Report (LER), No. E-PAL-84-07 - "Failure of

Reactor Coolant Pump C", was selected for further review. That review indicated that the failure was due to the impeller coming loose from the pump shaft; however, both the shaft and impeller were spares that had recently been installed as a unit and had been in storage for nine years. This failure was not considered to be related to commercial grade procurement because the spares were purchased under the original specification which predated 10 CFR Part 21.

Additional LERs and Deviation Reports (DRs) were also reviewed on-site. This review identified 34 potential procurement related equipment failures. Of these, the five most closely related to procurement were analyzed as follows:

- (1) D-PAL-85-047, "Pressure Indicator PIC 0751A Failed in Midposition." The root cause was failure of a resistor in the steam generator pressure loop. No indication of repetitive failure or procurement problems could be determined.
- (2) D-PAL-85-084, "Improper Purchase of Amplifier for Service Water Leak Detection System." The root cause of the original failure was not determined because the amplifier was obsolete and could not be replaced. The new amplifier was incorrectly purchased as non-Q.
- (3) D-PAL-85-298, "Q Temperature Indicator was Replaced with a non-Q Indicator during the 1983 Refueling Outage." The root cause of the original failure could not be determined. The replacement indicator was incorrectly purchased as non-Q.
- (4) D-PAL-84-303, "Charging Pump P-55A Failed." The root cause of the failure could not be determined or related to the procurement of the original components.
- (5) D-PAL-84-333, "Incorrect Diameter of Replacement Shaft for Reactor Coolant Pump C." The root cause was that the shaft was a spare from another utility and the original drawings were not available from the manufacturer. It was procured as safety-related.

The inspector's review of LERs, DRs, and the related purchase orders indicated two programmatic concerns. First, discussions with Palisades personnel in reference to items (2) and (3) revealed that there was some confusion regarding the safety classification of the components at the time of their purchase. This was due, in part, to the large backlog of pending Q-list interpretations. This item was previously recognized by the licensee and steps were taken to reduce the backlog; therefore, the inspectors had no further questions. Second, a Tracor servoamplifier and a Gould transformer that were previously purchased as safety-related from Appendix B approved suppliers were later purchased commercial grade without any supporting documentation to substantiate the change. This item was discussed with Palisades personnel who then demonstrated that the parts were purchased from approved suppliers and that the parts were subcomponents of a chart recorder and a battery charger; therefore, they

did not violate the seismic and IEEE qualifications. The inspectors had no further concerns about the hardware; however, the lack of documentation was still of concern. Criterion III requires that measures be established for selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components. Further, when the QA requirements of an original item are not specifically described, ANSI N18.7-1976 requires a documented engineering evaluation to ensure that interfaces, interchangeability, safety, fit, and function are not adversely affected or contrary to applicable regulatory or code requirements. This further concern was discussed with Palisades engineering and QA personnel. They indicated that the necessary evaluations were performed but that they were not always properly documented and agreed to revise their program as applicable. Pending further review, this matter is considered open (255/85006-01A).

The inspectors toured the storeroom and selected commercial grade items at random to verify that receipt inspection requirements had been met. For the items selected, the receipt inspections were found to be acceptable. However, the inspectors had one concern: Quality Assurance was determining the items critical characteristics to be verified through receipt inspection. Because this determination is a design function, this determination should be accomplished by the Engineering Department with QA concurrence. This item was discussed with licensee personnel and they agreed to revise their program as applicable. Pending further review, this matter is considered open (255/85006-01B).

The inspector's review of the procurement procedures indicated one additional concern. Procedure No. 10.03, "Procurement of Materials", makes reference to safety-related material which is classified "CQ-[commercial grade] Not Controlled". This classification of material is not consistent with the fact that safety-related material must be controlled. However, no examples of uncontrolled commercial grade material were found during this inspection. This item was discussed with Palisades personnel who agreed to revise the procedures as applicable. Pending further review, this matter is considered open (255/85006-02).

3. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraph 2b.

4. Exit Interview

The inspectors met with licensee representatives on May 17, 1985, and summarized the purpose, scope, and findings of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection.