

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report to. 50-329/84-20 (DPRP); 50-330/84-21 (DPRP)

Docket Nos. 50-329; 50-330

License Nos. CPPR-81; CPPR-82

Licensee: Consumers Power Company
1945 W. Parnall Road
Jackson, MI 49201

Facility Name: Midland Nuclear Plant, Units 1 and 2

Inspection At: Midland Nuclear Plant Site, Midland, MI

Inspection Conducted: May 29-June 1 and June 4-8, 1984

Inspectors: *C. H. Scheibelhut*
C. H. Scheibelhut

6/19/84

Date

V. J. Elsberg
V. J. Elsberg

6/19/84

Date

Reviewed By: *R. N. Gardner*
R. N. Gardner *for*
Project Inspector

7/2/84

Date

Approved By: *J. J. Harrison*
J. J. Harrison, Chief
Midland Section

7/2/84

Date

Inspection Summary

Inspection on May 29-June 1, and June 4-8, 1984 (Report No. 50-329/84-20 (DPRP); 50-330/84-21 (DPRP))

Areas Inspected: Routine safety inspection by regional personnel of licensee action on IE Circulars and previous inspection findings. This inspection involved a total of 120 inspector-hours onsite by two NRC regional inspectors, including 0 inspector-hours onsite during off-shifts.

Results: In the two areas inspected, no items of noncompliance or deviations were identified.

Details

1. Persons Contacted

Consumers Power Company (CPCo)

B. H. Peck, Site Management Office (SMO) Construction Superintendent
P. F. Strachan, SMO, Construction Engineer
R. J. Landon, Licensing Manager
J. J. Fremeau, Nuclear Activities Plant Organization (NAPO)
W. R. Bird, Midland Plant Quality Assurance Division (MPQAD)

Bechtel Power Company (BPCo)

M. H. Dietrich, Project Quality Assurance Engineer (PQAE)

The inspectors also interviewed other licensee and contractor personnel during the course of the inspection.

All of the above attended the exit meeting.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Unresolved Item (329/81-12-02, 330/81-12-02): During a previous inspection, a review was made of nonconformance reports (NCRs) generated during the installation of the reactor coolant pumps. The review was made to establish whether adequate corrective action had been taken to ensure the integrity of the pumps.

In two instances having to do with missing and/or imperfect threads in tapped holes in the pumps, it did not appear that the results of proof tests received a comprehensive engineering review.

Byron-Jackson, the pump supplier, supplied a rationale (Document No. 03-1023761-00) for accepting the motor stud taps. This document was reviewed and accepted by Babcock and Wilcox (B&W), the NSSS supplier.

Byron-Jackson revised the pump case analysis (B-J Report TCF-1023-STR Rev. C, dated June 19, 1980) to include the analysis and proof test of the imperfectly tapped hole in the pump case. The document was reviewed and approved by B&W.

A review of these documents indicated that the engineering review was accomplished and the proof tests valid. The item is closed.

- b. (Closed) Unresolved Item (329/81-12-03, 330/81-12-03): During installation of the reactor core support assembly guide blocks, the blocks moved relative to alignment pins during the welding procedure. These movements were measured and reported to B&W in accordance with the installation procedure. However, the movement of the blocks relative to the alignment pins was of such a magnitude that large stresses must have been generated during the welding. An engineering evaluation of the stresses was requested by the licensee from the vendor, B&W.

In a letter dated June 23, 1981 (SOM#16, 12E60, 12-155-01) B&W stated that the residual stresses caused by the welding would have no detrimental effect on the core support assembly even if the alignment pins were sheared. If the pin(s) were sheared, the weld has sufficient strength to hold the blocks in place. In addition, thermal cycling will have no adverse effects since the structure, pins, blocks, and weld metal have essentially the same coefficient of thermal expansion.

The letter was reviewed and the inspector agrees with the findings. The item is closed.

- c. (Closed) Item of Noncompliance (329/82-22-05, 330/82-22-05): During an inspection of the Poseyville laydown area that is used to store stock steel for the project, high strength steel was identified without the required markings of type and grade. In addition, random steel in the non-Q storage area was not painted, as required, and random steel in the Q storage area had a color coding that should not have been present.

The licensee issued an NCR (#M01-3-3-085) to correct the deficiencies.

All of the steel in the laydown area was inspected and marked as required. Bechtel Field Instruction FIG-9.600, "Color Coding of Field Purchased Pipe, Fittings, Bolting Material, Non-Q Hangers, Stock Steel, and Component Parts", was revised to designate the marking requirement for non-Q steel to be a Q attribute. Personnel responsible for the marking of steel were retrained to the requirements of FIG-9.600. QC inspections of the laydown area were increased from monthly to weekly.

A review of the revised field instruction, FIG-9.600, and an inspection of the Poseyville laydown area showed no nonconforming conditions. The item is closed.

- d. (Closed) Item of Noncompliance (329/83-11-01, 330/83-11-01): During a routine tour of the Poseyville laydown area, the inspector noted that stock steel, a structural I-beam and some Unistrut pieces were laying on the ground (off dunnage) contrary to Bechtel Field Procedure FPG-4.000, "Storage, Handling, and Maintenance of Permanent Plant Equipment and Materials," Rev. 10, dated June 10, 1983.

A dedicated crew was established to maintain the laydown area in accordance with the requirements of FPG-4.000. Additional supervision was added at the laydown area to direct the crew and implement access control to the area. The stock steel was placed on dunnage and the Unistrut was scrapped.

The inspector toured the area and found it neat and in compliance with the requirements of FPG-4.000. The item is closed.

- e. (Closed) Item of Noncompliance (329/83-10-01, 330/83-10-01): During an inspection of the Poseyville laydown area, the section reserved for Heating, Ventilation and Air Conditioning (HVAC) storage was examined. The inspector noted that Q and non-Q items slated for reusable stock were stored in close proximity to acceptable Q items. Also obviously discarded items were adjacent to safety-related duct pieces without an exclusion area being designated. While the Q and non-Q material slated for reusable stock were distinctively marked, there was no procedure established to require such marking.

The licensee reorganized the laydown area to provide clearly delineated sections for the various types of materials stored. The Zack Co. (HVAC subcontractor) issued Instruction MPP-11, Rev. 0, dated August 23, 1983, "Instruction For: Surveillance of the Poseyville Laydown Area and Fab Shop/Laydown Area." Zack Procedure MB-FP-21, "Procedure For: Removal/Reinstallation/Restocking" was revised (Rev. 3, dated March 30, 1984) to include the color coding requirements for material removed for restocking. Zack Procedure MB-FP-2, "Storage and Maintenance" was revised (Rev. 7, dated May 9, 1984) to require storage segregation by drawing number, material or accessory type, and Q from non-Q. Also, a nonconforming segregated area was established as well as a segregated restocking area. More frequent surveillance and maintenance of the laydown areas was initiated.

The revised procedures and the new instructions were reviewed and found to cover the indicated changes. The laydown area was inspected and found to be neat and in compliance with the procedures and instructions. The item is closed.

- f. (Closed) Unresolved Item (329/80-34-01; 330/80-35-01): HVAC fire dampers manufactured by the Ruskin Co. were supplied with 16 gage mullions. The specifications required 14 gage mullions.

The acceptability of the fire dampers was documented in Inspection Report 50-329/82-15, 50-330/82-15. However, the item was left open to determine why the item was reported under 10 CFR Part 21.

It has been determined that the 10 CFR Part 21 report pertained to other features of the dampers (the negator spring mounting) and not the mullion thickness. This item is closed.

- g. (Open) Item of Noncompliance (329/82-22-18, 330/82-22-18): A. Measures were not established to control retired Field Change Requests/Field Change Notices (FCRs/FCNs). B. Procedures were not followed which control the use of field sketches. C. Adequate control of field sketches was not formulated.

- A. Bechtel Field Instruction FID-2.100, "FCR/FCN Retirement Process," was inadequate in that it did not contain a requirement to provide for indicating on design drawings that applicable FCRs and FCNs had been retired. Field Instruction FID-2.100 was revised (Rev. 4, dated November 16, 1983) to require an annotation (circled letter R) on design drawings with retired

FCRs/FCNs against them. The Field Document Control Department performed a 100% review of all drawings with retired FCRs/FCNs against them to ensure compliance to the requirement.

A review of the revised Field Instruction FID-2.100 and a review of a sample of affected drawings shows that a measure has been established to control retired FCRs/FCNs and affected drawings have been properly annotated. This part of the item is closed.

- B.,C. Corrective actions on these parts of the noncompliance have not been completed. Therefore the item remains open.
- h. (Open) Item of Noncompliance (329/82-22-02, 330/82-22-02): A. Required foundation bolt washers were not installed in electrical cabinets. B. An unscheduled pull box was not properly installed. C. Cable tray support No. 86 was not properly installed. D. Cable tray support No. 14 was not properly installed.

A.,B. Corrective actions on these parts of the noncompliance have not been completed. Therefore the item remains open.

- C. The wall-to-support dimension required by drawing E-796(Q) sheet 2 of 2, Rev. 5 for hanger 86 was not the same as the as-built dimension.

Field Change Notice FCN E-7040 was written to approve the installed conditions and revise the affected drawing. Project Quality Control Instruction PQCI E-2.1 was revised (Rev. 11, dated May 24, 1984) to incorporate a final verification of cable tray support locations. QC inspectors were retrained to the requirements of PQCI E-2.1 with emphasis on the importance of following all requirements of design documents.

FCN E-7040 and drawing E-796(Q) sheet 2 of 2 were reviewed and found to have incorporated the above changes. It was verified that the retraining of the QC inspectors had been completed. This part of the item is closed.

- D. The wall-to-support dimension required by drawing E-796(Q) sheet 1 of 2, Rev. 11 for hanger no. 14 was not the same as the as-built dimension.

The dimension shown on the drawing was a drafting error. Drawing Change Notice DCN 16 to drawing E-796(Q) sheet 1 was prepared and approved and the drawing revised.

The revised drawing was reviewed and found to have the revision included. The PQCI revision and QC inspector retraining noted under C. above are pertinent to this condition as well. This part of the item is closed.

1. (Closed) Item of Noncompliance (329/80-09-01): An NRC inspection revealed that work proceeded through Field Construction Procedure (FCP) No. 132, "Trial Fit-Up of Internals Core Support Assembly," even though the specified levelness could not be attained and no written approval to change the levelness requirements had been received. This was in violation of B&W procedures.

To deal with the subject procedural violation, the licensee issued a Nonconformance Report (NCR/No. M-03-4-004, dated January 16, 1980). In response to the NCR, B&W Construction stated that when the required levelness could not be attained, B&W Lynchburg Office was contacted and the results transmitted. Lynchburg advised verbally that it would be acceptable to proceed with the work activities and that a written approval would be forthcoming. Because of delay in receiving the written approval, B&W Construction decided to proceed with work based on the verbal approval. To avoid violations of this type in the future, B&W Construction committed to improve response time from Lynchburg and not to proceed with work until written approval is received. However, before the NCR No. M-03-4-004 was closed, a similar procedural violation occurred during work activities of FCP-157. For this violation the licensee issued NCR No. M-03-4-0-044. To deal with repeated procedural violations of the same type, a B&W Construction Supervision and QC personnel meeting was held on July 15, 1980. Items discussed at that meeting included the following:

1. Requirements of B&W CC Quality Assurance Policy 9-QA-05 and Quality Control Procedure 9-QPP-102 to have and follow Field Construction Procedures.
2. To continuously review procedures during work activities in order to be aware of changes as they occur.
3. Instruct Quality Control personnel to enforce the procedure requirements.

In addition, B&W committed to include the above items as a topic for a Safety/QC Indoctrination meeting which is presented to the craft personnel.

The steps taken by B&W as described above, are considered to reasonably assure that the subject procedural violations will be avoided in the future. The item is closed.

- j. (Closed) Unresolved Item (329/80-01-03; 330/80-01-04): An NRC inspection revealed that there was no inspection requirement to verify conformance to the separation criteria of instrumentation and related impulse lines.

To correct deficiencies in the installation and inspection instructions as related to the separation requirements, the licensee issued a Nonconformance Report (NCR) No. M-01-4-002, dated January 11, 1980. Corrective actions to be taken included revising Specification 7220-J-218(Q), "Installation of Field-Mounted

Instrumentation for Nuclear Service," to address separation criteria in greater detail, 100% review of all related design drawings to assure compliance to the criteria, and training and/or orientation of personnel involved. Also, relevant procedures were to be revised to include the required separation inspection. The installation work of this class of instrumentation was suspended. Instruments and related tubing found not in conformance to the separation criteria were removed.

The inspector's review of Specification 7220-J-218(Q), Revision 24, dated May 4, 1984 shows that it includes specific installation instructions to meet separation criteria. This includes installation of barriers where the required separation distance cannot be provided. Also included are instructions for special barriers in the missile and jetstream areas. A list of safety-related redundant instrumentation is provided.

An inspection requirement to verify conformance to the separation criteria is included in the Quality Control Instruction 7220/PI-1.40, "Field Fabrication and Installation of Piping Related Instrumentation" (formerly QCI 1-1.40). As stated in paragraph 3.4 of Revision 10 of this document, dated March 20, 1984, the inspection is to be conducted visually and by measurement of separation distance to confirm the installation was done per instructions in Specification 7220-J-218(Q). For the reinspection program, procedure 7220/PI-1.99, "Reinspection of Q Listed Piping Related Instrumentation," has been issued. Paragraph 3.15 of Revision 1 of these instructions, dated March 8, 1984, requires the same separation verification as included in Instructions 7220/PI-1.40.

Based on the review of the revised procedures as described above, the subject concerns are considered to be resolved. This item is closed.

No items of noncompliance or deviations were noted.

3. Evaluation of Licensee Action with Regard to IE Circulars

(Closed) IE Circular 51-07 (329/81-07-CC; 330/81-07-CC), "Control of Radioactively Contaminated Material." The circular provides guidance on implementing an effective contamination control program through appropriate administrative controls and survey techniques. The items discussed include sensitivities of the survey instruments, instrument calibration, and personnel qualification.

As discussed in report 50-329/84-06; 50-330/84-06, the licensee referred to the Corporate Radiation Safety Plan Procedure ST 1241-01, "Contamination Control," and ST 1242-01, "Use and Control of Radiation Safety Material," for information on the concerns of the subject circular. The inspector's review of these procedures show that although the instrument sensitivities are not specifically discussed, the contamination limits stated would require instruments with sensitivities given in the subject circular. The methods of surveillance of personal effects, hand tools, repair parts, and other equipment of nonpersonal nature, follow the

guidance of the circular. Additional information on the subject concerns, including calibration facilities and personnel qualification and training, is provided in the Final Safety Analysis Report. This item is closed.

No items of noncompliance or deviations were noted.

4. Exit Interview

The inspectors and the Midland Site Senior Resident Inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 8, 1984. The Senior Resident Inspector summarized the scope and findings of the inspection. The licensee acknowledged the inspectors' findings.