

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-329/82-25; 50-330/82-25

Docket No. 50-329, 50-330

License No. CPPR-81, CPPR-82

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

Facility Name: Midland Nuclear Plant

Inspection At: Midland Nuclear Plant Site, Midland, MI

Inspection Conducted: November 29-30, December 1-3, and December 8-10, 1982

Inspectors: *CH Scheibelhut*  
C. H. Scheibelhut

*1/14/83*  
(Date)

*CH Scheibelhut for JAS*  
J. A. Simon

*1/14/83*  
(Date)

*CH Scheibelhut for AS*  
A. Sather

*1/14/83*  
(Date)

*CH Scheibelhut for RNG*  
R. N. Gustafson

*1/14/83*  
(Date)

*RF Warnick for*  
Approved By: W. D. Shafer, Chief  
Section 2, Office of  
Special Cases

*1/20/83*  
(Date)

Inspection Summary

Inspection on November 29-30, December 1-3, and December 8-10, 1982 (Report No. 50-329/82-25; 50-330/82-25)

Areas Inspected: Inspection of Class 1E panels in the auxiliary building, pipe hanger/snubber/restraints in the containment, welding of reactor pressure boundary piping, and concrete penetrations in the auxiliary building. This inspection involved 200 inspector-hours onsite by four NRC regional inspectors.  
Results: Of the four areas inspected, no items of noncompliance or deviations were identified.

## DETAILS

### Personnel Contacted

#### Consumers Power Company (CPCO)

\*B. H. Peck, Construction Superintendent  
\*M. Berghoff, MPQAD  
D. Cochran, MPQAD  
\*E. Jones, MPQAD  
D. Nott, MPQAD  
G. Rowe, Construction Engineering  
H. Saulia, Test Engineering  
\*M. Schaeffer, Section Head MPQAD  
T. A. Spelman, Construction Engineering  
R. M. Wheeler, Construction Engineering  
\*J. T. Walton, MPQAD

#### Babcock and Wilcox Construction Company (B&WCC)

\*V. N. Asgaonkar, Site Manager  
\*T. T. Davis, Construction  
\*S. Taulbee, QC

#### Bechtel Power Company

\*William Shearn, Subcontracts

\*Denotes those attending the exit interview.

### Functional or Program Areas Inspected

#### 1. Inspection of Completed ASME Section III Class I Pipe Hangers/Restraints/ Snubbers and Review of Associated QC Records

Three hangers/restraints/snubbers, identified as 2CCA-1-2-H1, 2CCA-1-2-H2, and 2CCA-1-2-H3, that were completed and accepted by QC were randomly selected in Unit 2. A field inspection was made to determine if these components were fabricated and installed in accordance with Drawings FSK-M-2CCA-1-2-H1 Revision 1, FSK-M-2CCA-1-2-H2 Revision 0, and FSK-M-2CCA-1-2-H3 Revision 0, respectively. No nonconformances were identified.

The following QC records pertinent to the above hangers were examined to determine conformance with the Quality Assurance Criteria of Appendix B of 10 CFR 50 and the Consumers Power Company Quality Assurance Program Manual for the Midland Nuclear Plant CPC-1-A, Revision 12.

- . Field Construction Procedure Number 234B
- . Weld Control Records BWCC Form Number 32261-2
- . Filler Metal Issue Sheet BWCC Form Number 31965

- . Certificate of Performance Welder Qualification Test
- . Record of Filler Wire Qualification Test
- . Receiving Inspection Reports for Hanger Materials (includes hangers and snubbers)
- . Welding Instruction Sheet WIN-101-1
- . Material Certifications and Test Reports
- . NDE Inspection Reports
- . Certificates of NDE Personnel Qualifications
- . QC Inspection Check Lists
- . Torque Record Sheets
- . Technical Specification for Field Procurement of ASME Section III, Subsection NF Materials and Component Standard Supports for Nuclear Component Pipe Supports for Consumers Power Company Midland Plant Units 1 and 2. Document No. 7220-M-217(0) Revision 1.

A discussion of audit procedures was held. It was determined that the Babcock and Wilcox Construction Company, responsible for installing the Class 1 piping and supports, is audited yearly in all of the field activities by personnel from the Copely, Ohio headquarters. Consumers Power personnel from the Jackson, Michigan office audited the B&WCC administrative functions on a yearly basis. MPQAD site personnel performed ongoing audits and surveillance of B&WCC activities.

No items of noncompliance or deviations were identified.

2. Observation of Work and Work Activities Associated With Reactor Coolant Pressure Boundary Pipe Welding

The B&WCC fabrication shop was visited to observe the welding of reactor coolant pressure boundary piping spool pieces. TIG welding of two stainless steel spool pieces was in progress. Welds 16 and 18 shown on Drawing FSK-M-2CCA-67-1, Revision 6 and weld 4 shown on Drawing FSK-M-2CCA-108-1, IDCN #7585 were witnessed. The welds were made in accordance with Field Construction Procedure 211-Unit 2 for welds 16 and 18 (butt welds) and FCP 729-Unit 2 for weld 4 (socket weld). The following details were observed during the course of the welding:

- . Weld identification/location
- . Joint preparation and alignment
- . Specified weld procedure used in root pass
- . Interpass temperature control
- . Use of specified purge gas
- . Periodic checks made to assure welding variables were within specified limits
- . Instruments used to check welding variables were within recalibration dates
- . Physical appearance of the welds
- . Weld surface suitable for NDE
- . NDE inspection of the completed welds
- . No unused (uncontrolled) filler metal was present
- . Receptacles were provided and used for weld rod stubs

- . Sufficient QC personnel were present to make the required in-progress inspections and checks
- . Proper QC inspection and signoff was accomplished at the hold points.

The following procedures and records were examined for conformance to ASME Section III Class 1 code requirements:

- . 9-QPP-108 Rev. 4, Receiving Inspection
- . 9-WG-106 Rev. 5, Visual Examination of Welds
- . WIN-219-1 Rev. 7, Welding Instruction Sheet
- . 9-PT-101 Rev. 2, NDE Instructions
- . Pipe and Fitting Material Certifications
- . Filler Metal Certification
- . QC Personnel Qualifications
- . Welder Qualifications.

No items of noncompliance or deviations were identified.

FCP-729 called for welding a valve into the spool piece. This valve, 1-CCA-GT, was present in the fabrication shop when the inspectors arrived. However, B&WCC QC determined that the valve was nonconforming because the manufacturer's data package was not on site. The valve was subsequently removed and returned to Bechtel storage.

This item is unresolved pending a review of procedures to determine if it was proper for a nonconformance item to be delivered to the fabrication shop. (50-329/82-25-01, 50-330/82-25-01)

### 3. Inspection of ASME Section III Class 1 Hanger Work in Progress

Preparations were observed for installation of pipe hanger 2CCA-106-1-H1(Q) associated with reactor coolant and pressure control Unit #2. Installation requirements for this hanger were delineated in Drawing FSK-MM-2CCA-106-1-H1(Q), Revision 0. During this inspection the following were observed:

- a. Holes were drilled at the proper elevation and at location to mount the hanger. A drilling permit No. 000525 was issued October 14, 1982.
- b. Numbered hanger installation parts at the job site were checked against the TCP that was available at the job site.

No items of nonconformance or deviations were identified.

### 4. Review of Q.C. Records on Incomplete and Complete Structures

- a. The inspector reviewed QC inspection records for concrete pour #C(593.75)A, containment #1, floor elevation 593'0"', sumpwalls at 90°. The records were complete and in accordance with the requirements of the Bechtel Administrative Guideline C-500, Revision 0, for rebar and concrete placement.

- b. The inspector reviewed the documentation for the modification of doorways #97, 113, and 114 at level 634'6" (QCIR C600-837 and C600-838, log 177167 and 177168). Work had proceeded through removal of concrete and repair or relocation of rebar.

No items of noncompliance or deviations were identified.

- c. The inspector observed a series of cored and chipped penetrations through the reinforced poured concrete and concrete block structure of the Auxiliary Building. The installation requirements for the placement of these penetrations were delineated in specification 7220-C-231(Q).

- (1) Paragraph 9.2.2 of the specification stated, in part, that "the minimum clear distance between two penetrations shall be two times the maximum dimension of the larger penetration."

(a) At level 568'-0", in the corridor between columns H-5.6 and H-6.2, a series of (approximately) 3" diameter holes were cored in the concrete slab; holes with the identification Nos. 200 and 201 were spaced approximately 3" apart; approximately 6" away, holes Nos. 202 and 203 were similarly spaced.

(b) At level 614'-0", between columns C-7.9 and C-8.7, two slotted holes approximately 6" x 2" and 8" x 2" were cored through a wall approximately 3" apart.

(c) At level 634'-6", in the corridor adjacent to containment No. 1, column 5.3, two irregular holes approximately 18" x 18" each were chipped through the concrete slab approximately 18" apart.

- (2) Paragraph 9.2.2 of the specification stated, in part, that the minimum clear distance between a penetration and an existing opening (any opening shown in the design drawings, including construction openings) shall be 1 1/2 times the horizontal width of the wider of the two....

At level 674'-6", column J-3 in the electrical equipment room, a 10" x 24" chipped penetration through the floor slab was located 8" away from an existing penetration of the same size.

- (3) For concrete replacement, Paragraph 17.B of the specification states, in part, that concrete shall be removed a minimum of 1" behind completely exposed reinforcing bars.

At elevation 619'-0", column J-9.1, a 16" x 25" penetration repair did not have 1" clear around exposed reinforcing bar. This repair appeared to be partially formed to receive concrete.

Paragraph 9.2 of the specification stated, in part, that deviations from these procedures shall have written approval from Project Engineering.

These items are considered unresolved pending a review of the licensee's records to determine whether these items had been identified and documented by the licensee. (50-329/82-25-02; 50-330/82-25-02)

5. Inspection of Partially Completed Electrical Equipment

From a review of the Class 1E 4160-volt load center panels for buses 1B05, 1A05, 2A05, and 2B05, a more detailed inspection of the twelve panels in the 2A05 line-up and the cable trays and hangers above them was conducted.

The panels inspected were 2A05-1 through -12 (Bechtel Drawing C-A25(Q) and ITE Drawing 33-50382-E-31). The panels were inspected for physical separation between cables of the various Class 1E channels and non-1E classification in accordance with the requirements stated in 10 CFR, Part 50, Appendix A, Criterion 17 and in IEEE Standard 384 and Regulatory Guide 1.75. The panels were also inspected for attachment of the panels to the floor as well as for workmanship of wiring and attachment to terminals.

Dimensions and locations of the cable trays and their hangers were checked in accordance with Bechtel Drawings E-717(Q), Sheets 1, 2, and 5 and E-617(Q), Sheet 1. These trays were identified as follows: 2AEB01, 2AKE01, 2AJK, 2AJB, 2ATA, and 2AJN.

One NCR tag was attached on the 2A05 bus. The tag required repair of a 1/2"-hole burned in the front door of panel 2A05-12 by a welding cable. Some tags were found on control wires within the panels that were part of the program to trace all cable routings. This program and its present state of progress were explained by a licensee representative.

No items of nonconformance or deviations were identified.

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. Unresolved items disclosed during this inspection are discussed in Paragraphs 2 and 4.c of the report.

Exit Interview

The inspectors met with the licensee representatives (denoted in the beginning of this report) on December 10, 1982, and summarized the scope and findings of the inspection activities. The licensee acknowledged the inspectors' findings.