

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION III

Report of Construction Inspection

RO Inspection Report No. 050-329/74-09

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

Midland Station Units 1 and 2
Midland, Michigan

License No. CPPR-81

License No. CPPR-82

Category: A

Vendor: Babcock & Wilcox Company (999-034)
Mount Vernon, Indiana

Equipment: Reactor Pressure Vessels

Type of Licensee: PWR (B&W) - 650 Mwe
818 Mwe

Type of Inspection: Vendor, Routine, Announced

Dates of Inspection: August 27-28, 1974

Dates of Previous Inspection: June 18 and 19, 1974 (Construction)

Principal Inspector: *D. M. Hunnicutt*
for R. E. Oller

9/19/74
(Date)

Accompanying Inspector: R. L. Brown, RO:I

Other Accompanying Personnel: None

Reviewed By: *D. M. Hunnicutt*
D. M. Hunnicutt,
Senior Reactor Inspector (Acting)
Engineering Support
Construction Branch

9/19/74
(Date)

8006200 628

SUMMARY OF FINDINGS

Enforcement Action

A. Violations

No violations of AEC requirements were identified during this inspection.

B. Safety Matters

No safety matters were encountered during this inspection.

Licensee Action on Previously Identified Enforcement Matters

Not applicable.

Unusual Occurrences

No unusual occurrences were identified.

Other Significant Findings

A. Current Findings

Vessels' Status

Unit No. 1 was determined to be in four major assemblies, including the closure head. The balance of work appeared to be on schedule. Unit No. 2 was essentially complete, including both the closure head and vessel. The vessel was in the process of prehydrostatic cleaning. The hydrostatic test is estimated to be performed subsequent to September 2, 1974.

B. Unresolved Matters

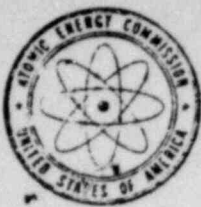
No unresolved matters were identified.

C. Status of Previously Reported Unresolved Matters

Not applicable.

Management Interview

A. The following persons attended the management interview at the conclusion of this inspection.



UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TELEPHONE
(312) 858-2660

A. RO Inspection Report No. 050-329/74-09
RO Inspection Report No. 050-330/74-09

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B. RO Inquiry Report No. _____

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C. Incident Notification From: _____
(Licensee & Docket No. (or License No.))

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With regard to the deficiency identified in Procedure No. 12-2-GEM-5, the licensee representative said he would request that the procedure be corrected.

b. Shop Inspection of Welding Equipment Calibration

The inspector examined numerous items of welding equipment in the shop and determined that calibration and/or preventive maintenance tags were attached. No expired calibration tags were identified.

2. Inspection of Reactor Vessels (RPV) Components

An examination of the RPV components for Units 1 and 2 established that the RPV for Unit 1 was in four major assemblies, and the RPV for Unit 2 was complete and being cleaned in preparation for hydrostatic testing. No workmanship deficiencies were identified. The B&W representative said the hydrostatic test of the Unit 2 RPV was estimated to be performed subsequent to September 2, 1974.

3. Base Material Test Reports (MTR's)

A review of base material test report packages for seven components for the Unit 2 RPV established that the information and test data was in accordance with the requirements of the applicable ASME/ASTM specifications and the special General Electric Company (GE) requirements. The subject components and the respective specification are as follows:

- a. Vessel flange, A-508-64, Class 2.
- b. Closure head flange, A-508-64, Class 2.
- c. Four recirculation nozzles, A-508-64, Class 2.
- d. Closure head dome plate, SA-333-67, Grade B, Class 1.

4. Weld Metal Analysis Report

A review was made of the B&W weld metal test specimen report, common to the closure head girth weld for Unit No. 2. The weld wire and flux were fully identified. The weld metal physical and chemical test data and Charpy-V impact test values at + 10°F were determined to be acceptable by B&W.

5. Deviations

Only three finalized contract variations (CV's) were generated since November 1973 for the work on Unit 1. The B&W representative stated no finalized CV's for Unit 2 were available. Review of Unit 1 CV's established they were complete and fully implemented and approved in accordance with the B&W system. In all three cases, the disposition of the CV's was to use "as is".

REPORT DETAILS

Persons Contacted

In addition to the persons listed in the Management Interview Section of this report, the following individuals were contacted.

Babcock & Wilcox Company (B&W)

L. A. Heberer, Project Engineer - Steam Generators
D. G. Heberer, Project Engineer - Reactor Vessels
M. H. McBride, Project Engineer - Pressurizers

Results of Inspection

1. Welding Equipment Calibration

a. Procedures

A review of B&W Technical Procedure No. 12-2-GEM-5, Revision 0, "Maintenance of Welding Equipment", established that it governed the preventive maintenance (PM) programs for welding equipment. The equipment was defined as power sources, manipulators, positioners, drum turners, and turning rolls. The procedure noted that it did not apply to out-of-service equipment.

The responsibility of the maintenance and construction (M&C) group included checking the accuracy of portable ampere and voltage meters on a monthly basis, attaching a calibration sticker, and sending the meters to the QC gage room for semi-annual recalibration against master meters traceable to the National Bureau of Standards. Calibration of new equipment, prior to its use, was also an M&C responsibility.

One section of the procedure appeared inconsistent in that it stated that ampere and voltage meters for manual metal arc (MMA) welding machines were not to be calibrated to the subject procedure. Instead, they were to be checked in accordance with Technical Procedure No. 12-2-GEM-4, Revision 5, "Gage Control Program". Review of this procedure by the inspector established that it did not appear applicable to calibration of meters for MMA machines but, instead, applied to pressure gages and other mechanical measuring devices.

Further review established that provisions for checking welding parameters, as voltage, during use of MMA welding machines, were provided for in Quality Program Procedure No. 12-2-QP-113, Revision 0, and QC Technical Instruction No. 7604-511-08.

Babcock & Wilcox Company (B&W)

N. (NMI) Bottorf, Manager - Component Engineering - Nuclear
Power Generating Department, Lynchburg (NPGD)
J. E. Larty, Component Manager - NPGD
D. L. McCabe, Task Engineer - NPGD
J. E. Jaquess, Resident Quality Assurance Engineer - NPGD
R. L. Rogers, Manager - Quality Engineering - Mt. Vernon
J. L. Johnson, Section Supervisor - Quality Assurance
Engineering - Mt. Vernon
R. F. Hollander, Task Engineer - Mt. Vernon

Consumers Power Company (CP)

H. W. Slager, Midland Project Quality Assurance Supervisor

B. Matters discussed and comments, on the part of management personnel,
were as follows:

1. The inspector commented that review of B&W Technical Procedure No. 12-2-GEM-5, Revision 0, "Maintenance of Welding Equipment", contained a paragraph which stated, in essence, that ampere and voltage meters for manual arc weld machines would be calibrated in accordance with B&W Procedure No. 12-2-GEM-4. However, the inspector's review of Procedure No. 12-2-GEM-4 failed to identify calibration provisions for subject equipment. The reference appeared to be in error.

The B&W representative acknowledged this matter appeared to be in error and said that it would be corrected. The licensee representative said he will transmit this matter to his management and, at a later date, he will verify that the procedure is corrected. (Report Details, Paragraph 1.a)

2. The inspector said that, with regard to the balance of procedures and records reviewed, and discussions and observations common to Midland Units No. 1 and No. 2 work, he had no questions at this time.