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

REGION III

Report No. 50-329/79-08; 50-330/79-08

Docket No. 50-329; 50-330 License No. CPPR-81; CPPR-82

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

Facility Name: Midland Nuclear Power Plant, Units 1 and 2

Inspection At: Midland Site, Midland, Michigan

Inspection Conducted: January 2-31, 1979

Inspectors: R. J. Cook for 4/25/79

Approved By: R. C. Knop, Chief 4/25/79
Projects Section

Inspection Summary

Inspection on January 2-31, 1979 (Report No. 50-329/79-08; 50-330/79-08)
Areas Inspected: Examination of site conditions, inadequate review of seismic and environmental component qualification test data, seismic braces for Class 1E battery racks, settlement of diesel generator building foundations and structures, auxiliary piping system field welding and field fabrication of Unit 2 Incore Instrument Tank, Unit 2 core flood line weld repairs, wire supports in control room panels, flooding of the Auxiliary Building, fit up of Unit 2 reactor coolant system piping and components, welding of Unit 2 reactor coolant system piping, and assembly of Unit 2 reactor vessel internals. This inspection effort involved a total of 58 inspector-hours onsite by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

2237 285

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DETAILS

Persons Contacted

*T. Cooke, Project Superintendent
*J. Corley, QA Section Head IE and TV
*B. Peck, Construction Supervisor
*W. Bird, Section Head, Quality Engineering
M. Shaeffer, QA Engineer
D. Keating, Field QA Engineer
P. Kymer, Field QA Engineer
*L. Dreisbach, Bechtel Corporation Project QA Engineer
*D. Hollar, Bechtel Corporation QA Engineer
*R. Shope, B&W Project Engineer
*J. Ashworth, B&W QC Inspection Supervisor

Numerous other principal staff and personnel were contacted during the reporting period.

*Denotes those present during at least one of the three exit interviews conducted during the report period.

Licensee Action on Previous Inspection Findings Reportable Deficiencies - 50.55(e) Items Settlement of Diesel Generator Foundations and Structures

Open (Item No. 329/78-13-03; 330/78-13-03): The licensee has kept the Resident Inspector informed of some of the activites being performed pertinent to the settlement of the diesel generator building during the reporting period. This information was subsequently relayed to personnel from the Regional office involved in investigating this event. These personnel were onsite on January 22-25, 1979, to review information and/or activities pertaining to the building settlement. The licensee has started to add preloading sand into and around the diesel generator building during the reporting period.

Class 1E Battery Racks, Seismic Brace

During the report period, the Resident Inspector was informed that Bechtel Corporation had not accepted design change drawings for Class 1E battery racks to upgrade the design to withstand a seismic event and limit the build up of horizontal momentum during such an event. It is estimated that it will take approximately four weeks to procure the components for the battery rack modifications once the design drawings are approved.

2237 286

Inadequate Review of Seismic and Environmental Component Qualification Test Data

During the reporting period the Resident Inspector met with the licensee to discuss the review of component qualification test data. The licensee has determined that Bechtel Supplier Quality Representatives should determine the availibility and adequacy of Quality Verification Documentation packages. However, there appears to be some confusion in the administrative procedures as written. The adequacy of review pertinent to qualification testing data by Project Engineering of the seismic and environmental qualification test data is presently under review by the licensee. Some discrepancies have been noted by the licensee.

Functional or Program Areas Inspected

1. Site Tours

At periodic intervals, generalized tours of the facility were performed by the Resident Inspector. The Resident Inspector was accompanied by a member of the Regional Staff during some of these tours. During the reporting period, these tours covered primarily Unit 2 containment, the Auxiliary Building and the control tower. Other areas were examined by virtue of the route taken. These tours were intended to assess the cleanliness of the site; storage condition of equipment and piping being used is site contruction; the potential for fire or other hazards which might have a dileterious affect on personnel and equipment and to witness construction activities in progress. As a result of one of these tours the licensee was informed that the condition of pipe end coverings in the Auxiliary Building appeared to be deteriorating. The licensee acknowledged the comment and immediate steps were taken to improve the situation.

2. Auxiliary Piping System Field Welding and Fabrication

Completed field welds in the decay heat removal and core flood systems and the containment spray systems located on the 568, 599 and 614 foot elevation levels of the Auxiliary Building were examined. Welding on spools identified as 2GCB-25-611-3-3, 1GCB-32-610-3-1 and 1HCB-16-612-3-1 were examined for surface condition being compatible for NDE testing. No discrepancies were identified.

3. Field Fabrication of Unit 2 Incore Instrument Tank

During the reporting period, welding and fitting activities performed during the fabrication of Unit 2 Incore Instrument

2237 287

Tank-2T-87 were observed. Bechtel QC and Consumers QA have performed regular overview inspections of the subcontractor activities.

During the reporting period, carpenters applied Weldwood Panel Adhesive (Stock No. 0151) and cemented rubber gasket material around the circumference of Unit 2 Incore Instrument Tank at that portion of the tank located at the 546-foot elevation. The subcontractor generated nonconformance report CB&I-NCR No. 8 covering unauthorized material being applied to the tank. The objectionable material was subsequently removed from the tank on February 2-3, 1979, using CB&I Procedure CP/71701 and Bechtel Specification 7220-M-90-(Q)17-1. This procedure permitted the use of stainless steel brushes, TERGITOL N.P.X. solution and alcohol rinse.

4. Unit 2 Core Flood Line Weld Repairs

Repairs were being made to the Unit 2 East Core flood line designated 2CCA-21-S-611-1-2, Field Weld No. 19 during the report period. The radiographs identifying the defects and the excavated areas were examined. No discrepancies in the NDE associated with these defects and the implementation of the repair procedures were noted.

5. Control Room Panel Wire Supports

During the report period, bookshelf supports were noted being used as wire supports in various control room panels. Use of these supports is addressed in Nonconformance Report No. M-01-8-9-008. More details pertaining to the use of these supports is covered in NRC Inspection Report No. 50-329/79-02; 50-330/79-02.

6. Flooding of Auxiliary Building

On January 18, 1978, at approximately 12:30 a.m., flooding of the 568-foot elevation of the Auxiliary Building was noted by night shift personnel. The source of the water was from the cooling pond flooding into the circulating water intake bays through leaking sluice gates. The water backed up through the circulating water intake pipes when a pump used to pump leakage from the circulating water intake bays failed. The water drained into the Turbine Building through circulating water drain lines and ultimately spilled into the Auxiliary Building through an open pipe tunnel. The capacity of the Auxiliary Building sumps and/or

sump pumps was not great enough to handle the volume of water and the level reached approximately 8-inches before circulating water could be isolated.

Damage sustained by safety related equipment was contamination of four valves which had become wetted by the flood water. These valves were satisfactorily cleaned in accordance with Bechtel Specification M-342, Rev. 2.

7. Fit Up of Unit 2 Reactor Coolant System Piping and Components

During the report period, Unit 2 reactor coolant system piping and components were being installed an welded. The fit up for cold leg to vessel joints designated WJ4-2, WJ4-3 and reactor coolant pump 2P-51B were examined. No discrepancy was noted in the fit up clearances.

During the examination of these joint fit ups, rust spots were noted on the inside surface of Unit 2 reactor vessel. These spots are attributed to surface contamination acquired at the vessel fabrication shops. It is intended that these spots will be removed during the final stages of cleaning.

8. Welding of Reactor Coolant System Piping - Unit 2

During the reporting period, reactor coolant system pipe welding was performed on Unit 2 which was examined by the Resident Inspector. Particular attention was given to joints designated WJ31-2, WJ2-2 and WJ4-2. It was noted that these joints were being welded within the requirements of the procedure and control was being maintained. No discrepancies contrary to requirements were noted.

9. Partial Assembly of Unit 2 Vessel Internals

During the report period, Unit 2 vessel internal components were unpackaged and partially assembled. During the assembly process, portions of the following evaluations were witnessed by the Resident Inspector:

a. Cleaning of the internals assembly lifting device and prelift inspection.

b. Receipt inspection and lifting of the upper plenum and setting on the indexing fixture.

c. Removal of the top half of the shipping container from lower core barrel section and subsequent preliminary inspection of the exposed lower core barrel.

2237 289

d. Lifting of the upper core barrel from shipping container and placement on lower core barrel.

e. Setting and torque of bolting to attach upper and lower core barrel sections.

f. Lifting of the assembled core barred and placing on the storage stand.

During witness of these evaluations, it was noted that the polar crane hood and sheaves did not meet cleanliness standards. The licensee cleaned the crane hook prior to making lifts where dirt would contaminate internals being lifted.

Safety wires were noted to be missing from some bolts on the lifting device and were replaced prior to exposing core barrel sections to potential loose parts.

It was determined that the crane tensiometer was out of commission during the lifts. The procedures used did not explicitly address the need for a tensiometer. However, a working tensiometer would have aided in meeting the procedural requirements to determine when the load was completely assumed by the overhead crane. The licensee has agreed to not attempt any internals component lifts and assembly which involves close tolerance fit of mating parts until an operating tensiometer is made available.

10. Exit Interview

The Resident Inspector met with licensee representatives (denoted under Persons Contacted) on January 4, January 19 and January 26, 1979. The inspector summarized the scope and findings of the inspection effort to date. The licensee acknowledged the findings reported herein.

2237 270