

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

REGION III

Report No. 50-329/81-10; 50-330/81-10

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, MI

Inspection Conducted: April 1-30, 1981

Inspector: *R. J. Cook*
R. J. Cook

5/8/81

Approved By: *D. C. Boyd*
D. C. Boyd, Chief
Reactor Project Section 1A

5/12/81

Inspection Summary

Inspection on April 1-30, 1981 (Report Nos. 50-329/81-10; 50-330/81-10)

Areas Inspected: Activities pertaining to resolution of the unresolved item pertaining to tightness of conduit clamps; examination of site conditions and laydown areas; quality control classification of diesel fuel oil; soil boring activity; 50.55(e) item pertaining to potential failure of service water sluice gates; 50.55(e) item pertaining to adequacy of structural reinforcement at major containment penetrations; and additional review of prior NRC findings associated with HVAC construction activities. The inspection involved a total of 94 inspector-hours onsite by one NRC inspector including 21 inspector-hours onsite during off-shifts.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Consumers Power Company Personnel

D. Miller, Site Manager
T. Cooke, Vice President, Midland Project
B. Marguglio, Director, Environmental Services & Quality Assurance
*W. Bird, Manager, QA, Midland Project
*D. Turnbull, Site Project QA Superintendant
*H. Leonard, QAE, Section Head
*M. Schaeffer, QAE, Electrical Supervisor
M. DeWitt, PMO, Night Shift Supervisor
*E. Jones, QA Electrical
R. Hirzel, QA Civil

Bechtel Power Corporation Personnel

*M. Dietrich, Project QA Engineer
E. Smith, Quality Control
C. Spinks, Electrical QC

Army Corps of Engineers Personnel

R. Erickson
H. Singh

U.S. Nuclear Regulatory Commission Personnel

D. Hood, NRR Project Manager
E. Brown, Office of the Executive Legal Director
W. Rogers, Resident Inspector, Davis Besse Site

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

*Denotes those present during the Resident Inspector exit interview and/or meetings pertaining to tightness of conduit clamps which were conducted during the reporting period.

2. Licensee Action on Previously Identified Items

(Closed) Unresolved Item (50-329/80-19-01; 50-330/80-20-01). During the reporting period, the licensee has issued a Drawing Change Notice for Class 1E Conduit Supports Specification and Installation E-42(Q) to change the wording of Section 3.b under Installation to read:

"Bolts in standard pipe straps shall be torqued in accordance with the manufacturers recommendations. Conduit clamps shall be installed using good construction practice. Good construction practice includes:

- "1. Finger tight plus two turns
- "2. Additional turns if required to obtain a notable increase in effort to turn nut or to cause deformation of clamp ears.
- "3. Some discernable gap exists between ears of clamp. Touching of tips of clamp ears is acceptable."

To reflect the above and establish a mechanism for inspecting for conduit clamp tightness, Quality Control Instruction E-1.0 was modified to read:

"Verify conduit clamp tightness by the following:

- "A. Some discernable gap exists between ears of clamp. Touching of tips of clamp ears is acceptable.
- "B. Rap the clamp to assure conduit clamp tightness."

Based on these procedural changes, this unresolved item is considered closed.

3. Functional or Program Areas Inspected

a. Site Tours

At periodic intervals during the report period, tours of essentially all site areas were performed. These tours were intended to assess the cleanliness of the site; storage conditions of equipment and piping being used in site construction; the potential for fire or other hazards which might have a deleterious effect on personnel and equipment; and to witness construction activities in progress.

During one of these tours, Mr. D. Hood, NRR Project Manager and Ms. E. Brown, Office of the Executive Legal Director accompanied the inspector while those areas being discussed as part of the soil settlement issues were examined.

b. Examination of Laydown Area

During the reporting period, the laydown area was examined. It was noted that piping and equipment were stored on dunnage and the area appeared drained. Pipe caps were installed on safety related piping and segregation existed between safety and nonsafety related items.

c. Quality Control Classification of Diesel Fuel Oil

During the reporting period, the Resident Inspector established that diesel fuel oil had been classified as a safety related consumable item and was applied to the "Q" list for Consumables on April 8, 1981. This requires establishing material control for the diesel fuel oil and invocation of the requirements set forth in Consumers Power Company Midland Site Procedures No. CHP 8145.6, OPS 4520.1 and PLT 4520.1. The

Operational Testing Group has responsibility for establishing the quality of the diesel fuel and cleanliness of the fuel oil system during turnover.

d. Soil Borings

During the reporting period, borings requested by the Army Corps of Engineers at locations designated Nos. COE 1 through COE 16 were completed, including those borings classified as record borings, at the diesel generator building. The sample locations were at the diesel generator building, service water building, service water retaining wall, baffle dike and cooling pond dike. All the samples were terminated in natural material. Additional sample borings have been proposed in the vicinity of the borated water storage tanks. The undisturbed samples are being transported to the Woodward-Clyde Consultants laboratory in Clifton, New Jersey for testing.

A representative from the Regional Office and the Army Corps of Engineers have observed taking of soil samples and the Army Corps of Engineers has observed some sample testing at the Woodward-Clyde laboratories.

e. 50.55(e) Item - Potential Failure of Service Water Sluice Gates to Open

On April 3, 1981, the licensee informed the Resident Inspector and the Regional Office of a reportable item pertaining to the potential inability of the service water sluice gates to operate. This determination was based on several discrepancies being noted with the installed sluice gates, such as incorrect stem to stem nut interference, misaligned stem guide brackets, broken wall brackets, inordinate amount of mounting plate deflection and failure of a test gate.

The licensee performed an evaluation to determine which of the above conditions, either acting solely or in combination, would prevent operation of the sluice gates - assuming the condition had gone undetected. The licensee determined that the discrepancies noted would not have precluded operation of the sluice gates, and the failed test was attributed to using a stem which had previously been damaged. The licensee subsequently notified the NRC on May 1, 1981 that the item was no longer considered reportable under the provisions of 10 CFR 50.55(e).

f. 50.55(e) Item - Adequacy of Structural Reinforcement at Major Containment Penetrations

On April 17, 1981, the licensee informed the Resident Inspector and the Regional Office that the amount of reinforcing steel used in the area of major containment penetrations such as the equipment hatch, personnel air locks, and emergency escape hatch is less than that used in some other similarly designed plants. The licensee is performing a design evaluation of the original design criteria and the actual design.

g. Investigation - Construction Activities Pertaining to Installation of HVAC Systems

During the reporting period, the Resident Inspector reviewed additional information pertaining to the findings documented in NRC Inspection Report No. 50-329/80-10; 50-330/80-11 which were generated as a result of investigations into the fabrication and installation of heating, ventilating and air conditioning (HVAC) systems. The results of this inspection effort are documented in the NRC response to Consumers Power Company letter dated January 30, 1981 which addressed the NRC Notice of Violation dated January 7, 1981.

Exit Interviews

The Resident Inspector attended the Exit Interviews conducted by Messrs. C. Jones and R. Gardner, Region III Reactor Inspectors, on April 16 and May 1, 1981 respectively.

The Resident Inspector met with management personnel from Consumers Power Company and Bechtel Power Corporation (denoted under Persons Contacted) on April 21 and 24, 1981 to discuss acceptable means of determining adequate tightness of conduit pipe clamps.

The Resident Inspector met with licensee representatives (denoted under Persons Contacted) on May 4, 1981 to summarize the scope and findings of the inspection effort through April 30, 1981. The licensee acknowledged the findings reported herein.