

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

REGION III

Report No. 50-155/77-14

Docket No. 50-155

License No. DPR-6

Licensee: Consumers Power Company
212 West Michigan Avenue
Jackson, MI 49201

Facility Name: Big Rock Point Nuclear Plant

Inspection at: Big Rock Point Site, Charlevoix, MI

Inspection Conducted: September 12 and 13, 1977

Inspectors: *[Signature]*
C. M. Erb

9/30/77

Approved By: *[Signature]*
D. H. Danielson, Chief
Engineering Support Section

9/30/77

Inspection Summary

Inspection on September 12 and 13, 1977, (Report No. 50-155/77-14):

Areas Reviewed: Inservice inspection activities including, records of visual and ultrasonic testing; UT evaluation sheets; and repairs arising from this inspection. The inspection involved 16 inspection-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

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Persons Contacted

Consumers Power Company

C. J. Hartman, Plant Superintendent
T. W. Elward, Technical Superintendent
S. E. Martin, Senior Engineer
G. C. Withrow, General Engineer
G. D. Gilbooy, Quality Assurance Engineer
B. O'Donnell, Quality Assurance Engineer
R. Kropp, Engineer
T. Raynor, Welding Specialist

All the above persons were present at the exit interview except Mr. Raynor.

Functional or Program Areas Inspected

1. Inservice Inspection Work Observation and Data Review

a. History of Inservice Inspection Requirements

The Big Rock Point Nuclear Plant went into commercial service on December 8, 1962. The first ten year plan was initiated on January 1, 1972 and December 31, 1981, will mark the end of this ten year period.

The end of the second 3 1/3 year period will occur on August 31, 1978, at which time an update of Technical Specifications to 10 CFR 50.55(a) will require categorization and addition of Class 2 and Class 3 systems to the ISI program. Under the present Technical Specifications, Class 1 and certain high energy piping systems are subject to ISI. Welds in the pressure vessel belt line region are not accessible for UT due to thermal sleeves. The outside of the pressure vessel is not accessible due to proximity to the concrete shield.

b. Reactor Pressure Vessel Welds

During this inspection, it was not possible to witness nondestructive testing or to examine hardware as a leak rate test was underway in containment. For the pressure vessel, cracklike reflectors from UT are to be evaluated to ASME Section XI, 1974 edition.

Nozzle welds were inspected using a fixture and working from the inside of the vessel. No belt welds were inspected, but the flange to vessel weld was inspected using the flange surface. No defects requiring evaluation were noted in this weld.

c. Records - Reactor Depressurization System

This system was installed in 1975. Five welds in this system were given a UT pre-service and eleven welds were inspected by radiography. While pipe material is onsite for fabrication into calibration standards, the necessary machining has not been performed. This system will be inspected to the requirements of ASME Section XI, 1974 edition.

This is an unresolved matter and will be examined before the next UT inspection.

d. Piping Systems - Repairs

- (1) Weld Procedures No. GT-1-1, Revision 3 and SM-1-1, Revision 0, were used to repair carbon steel welds where required. These procedures are in conformance with ASME Section IX and Section XI.
- (2) Deviation reports relating to the following areas were examined. These reports were written when repairs were required due to this inservice inspection.

<u>Weld No.</u>	<u>System</u>	<u>Size</u>	<u>NDT</u>	<u>Comment</u>
43A	Main Steam	10" x .940	RT-01	Repaired
8	6 ECS-102	6"	visual	Not Repaired
1	2 RCS-106	2" Socket	LP	Repaired
18PL	20 MRS-121	Support Lug	UT	In Review

Weld 43A on a bypass line has been radiographed. Radiographic report No. 4001 had not been returned from Jackson so was not available onsite for examination. The required hydrotest for this weld was not known.

Weld No. 8, was in a 6" pipe to the emergency condenser and was completely cut out. A new weld preparation has been made. This weld will be made, after completion of containment leak rate test.

Weld No. 1 has been satisfactorily repaired. However, weld disposition No. 18PL will require further review.

Documentation relative to the above areas will be reviewed during a subsequent inspection. This area is considered unresolved.

e. Records

- (1) The authorized inspector for this ISI was L. Dykstra, Hartford Steam Boiler and Insurance Company. The third party inspector for the weld repair was L. Osborne also of the Hartford Steam Boiler and Insurance Company.
- (2) Several deviation reports were examined and found to conform to the CPQA Manual. Deviation report No. BRP-77-113 was written against Main Recirculation Valves MO-N003B and MO-N003 A&B. Corrective action was outlined, and required replacement of several studs and nuts.
- (3) A number of UT data sheets and calibration sheets were examined and found to conform to ASME Section XI and SWRI specifications.

Certifications of materials, equipment, and personnel were on file and met UT, PT, and VT requirements of ASME Section XI. Many dissimilar welds (stainless steel to carbon steel) exist in this plant and special effort will be made to examine such welds, particularly when the revised Technical Specifications are adopted. Radiation is a very real problem in this plant. In 1962 the contour and surface condition of welds was not controlled as it is today, which results in considerable grinding and rework for meaningful ISI results.

Within the areas examined, no items of noncompliance or deviations were identified.

2. 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 the inspection are discussed in Paragraphs 1.c and 1.d.

3. Exit Interview

The inspector met with licensee representatives (shown under Persons Contacted) at the conclusion of the inspection on September 13, 1977. The inspector summarized the purpose and findings of the inspection. The licensee acknowledged the findings as reported.