

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-266/84-15(DRP); 50-301/84-13(DRP)

Docket No. 50-266; 50-301

License No. DPR-24; DPR-27

Licensee: Wisconsin Electric Power Company  
231 West Michigan  
Milwaukee, WI 53203

Facility Name: Point Beach Nuclear Power Plant Units 1 and 2

Inspection At: Point Beach Site

Inspection Conducted: August 1 - September 30, 1984

Inspectors: R. L. Hague

R. J. Leemon

Approved by: *B. J. Leemon for*  
I. N. Jackiw, Chief  
Reactor Projects Section 2

Date

10/16/84

Inspection Summary

Inspection on August 1- September 30, 1984 (Report No. 50-266/84-15(DPRP); 50-301/84-13(DPRP))

Areas Inspected: Routine, unannounced inspection by resident inspectors of Licensee action on previous inspection findings; receipt of new fuel; preparation for refueling; operational safety; maintenance; surveillance; Licensee Event Reports; IE Bulletins; independent inspection; and plant trips. The inspection involved a total of 252 inspector-hours onsite by two inspectors including 60 inspector hours on offshifts.

Results: Of 10 areas inspected, no items of noncompliance were identified in 9 areas. One item of noncompliance was identified in the remaining area (failure to follow procedures, paragraph 8).

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## DETAILS

### 1. Persons Contacted

- \*J. J. Zach, Manager, PBNP
- T. J. Koehler, General Superintendent
- G. J. Maxfield, Superintendent - Operations
- J. C. Reisenbuechler, Superintendent - Technical Services
- W. J. Herrman, Superintendent - Maintenance & Construction
- \*R. E. Link, Superintendent - EQR
- R. S. Bredvad, Health Physicist
- R. Krukowski, Security Supervisor
- \*F. A. Flentje, Staff Services Supervisor

The inspectors also talked with and interviewed members of the Operations, Maintenance, Health Physics, and Instrument and Control Sections.

\*Denotes personnel attending exit interviews.

### 2. Licensee Action On Previous Inspection Findings

(Closed) Unresolved item (50-266/78-16-01): The snubber identification numbering system needs adjustments and simplification. Revision 1 to procedure PT R-3 dated October 9, 1978, included new snubber designations.

(Closed) Unresolved item (50-266/78-16-02): The manufacturer's established method of measuring piston rod extension position for the Grinnell snubbers was not incorporated as a part of the PT R-3 procedure. Revision 1 to procedure PT R-3 dated October 9, 1978, incorporated this instruction.

(Closed) Unresolved item (50-266/78-16-03): Only seven bolts used in an eight bolt flange. An evaluation was completed which determined the eighth bolt was not necessary. Calculations are included in a Reimer to Reed memo dated October 25, 1978.

(Closed) Unresolved item (50-266/78-16-04): Snubber HS-14 required further stiffening. Modification number M554, completed August 21, 1979, provided stiffened bracing for snubber HS-14.

(Closed) Unresolved item (50-266/78-16-05): The measurement of the large Anker-Holth snubbers was inconsistent and not in accordance with procedural instruction. Revision 1 to procedure PT R-3 dated October 9, 1978, incorporated appropriate changes.

(Closed) Unresolved item (50-266/78-16-06): Lack of evaluation on snubber cold position settings. Revision 1 to procedure PT R-3 dated October 9, 1978, includes both cold and hot position settings.

(Closed) Unresolved item (50-266/78-16-07): Appeared to be lack of evaluation on the way cold piston stroke on snubbers was measured from one inspection to another. Revision 1 to procedure PT R-3 dated October 9, 1978,

included a note to insure consistent measurements from inspection to inspection.

(Closed) Open items (50-266/81-13-01; 50-301/81-15-01): Audit and upgrading of maintenance request system. These items picked up by Quality Assurance inspection and carried as open items (50-266/83-21-05; 50-301/83-20-05).

(Closed) Open Item (50-266/81-17-01): Post maintenance cleanliness. This item was addressed by a Quality Assurance inspection and carried as open items (50-266/83-21-20; 50-301/83-20-20).

(Closed) Unresolved item (50-266/84-04-01): Debris in primary system. The results of Westinghouse's analysis of the debris were inconclusive as to its origin. However, it appears that there was a combination of newly introduced material and some that may have been in the system since original construction.

(Closed) Open item (50-301/82-01-05): Revise logs and procedures to check diesel and AFW turbine governor oil levels. Revision 26 for Unit 1 and revision 28 for Unit 2 turbine building logs were approved July 28, 1984, and included the governor oil level checks.

(Closed) Unresolved item (50-301/83-04-01): Auxiliary feedwater operability clarification. Modification 83-104 was completed on June 29, 1984. This modification provides for automatic alignment of the auxiliary feedwater discharge valves to the affected unit and isolation from the unaffected unit on a system initiation signal.

(Closed) Open item (50-301/83-15-02): Safety injection pump shaft coupling key failures. The licensee had metallurgical analysis performed on the failed keys but results showed them to be made of the correct material and correct hardness. No subsequent failures have occurred.

(Closed) Non-compliance (50-301/84-03-01): Failure to perform adequate 50.59 reviews. The 50.59 review process has been changed significantly to include more extensive reviews and the scope of areas considered for review has been greatly expanded.

### 3. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of August and September. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the auxiliary, reactor, and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the months of August and September, the inspector walked down the accessible portions of the Diesel generator, safety injection, and containment spray systems to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, and administrative procedures.

Based on the evaluation of a unit 2 flux map taken on September 13, 1984, it was determined that FQ was exceeded at one point near the top of the core. The licensee took the technical specification required action of power reduction with appropriate power range high setpoint reductions. They also reduced the overpower and overtemperature delta T trip setpoints. A subsequent flux map taken on September 15, 1984, showed all FQ limits met. During this second flux map the drive unit which had given the out-of-specification FQ on the previous map failed. Based on the failure mode it is believed that on the first map the detector was inserted past the active portion of the core into an area of maximum reflection. This would have caused the erroneous high reading.

Unit 2 was in post end-of-life coast down operation at the time the flux maps were run. Operation was continued at reduced power with the reduced trip setpoints.

#### 4. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented.

Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

4D diesel generator annual inspection.

Refueling water storage tank level transmitter changeout.

Diesel fire pump inspection.

Modification to provide feedwater to auxiliary feed pumps.

Oil changes for all auxiliary feed pumps.

Following completion of maintenance on the 4D diesel generator and auxiliary feed pump oil changes, the inspector verified that these systems had been returned to service properly.

5. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the Unit 1 reactor protection and safeguards logic containment purge supply and exhaust valves, and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector also witnessed portions of the following test activities:

Auxiliary feedwater check valve and flow indicator testing.

Diesel generator redundant system check.

Operability of refueling equipment and tools.

6. Licensee Event Reports Followup

Through direct observations, discussions with licensee personnel, and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.

266/82-06-01 Valve leakage in excess of Technical Specification limit.

266/82-09-03 4.16 KV relays did not meet 0 volt time delay specification.

266/83-02-00 3D diesel failure to start.

266/83-06-00 Missed frequency for RWST/BAST boron concentration sampling.

266/83-07-00 Failure of CIV-3200C to close during testing.

266/83-08-00 Failure of CIV-3200C to close during testing.

- 266/83-09-00 Containment isolation valve leakage in excess of Technical Specification limit.
- 266/83-10-00 Inoperable fire detectors in AFW pump room.
- 266/83-11-00 Loose wire on 86 lockout relay 1P15B breaker.
- 266/84-03-00 Reactor trip on high source range flux.
- 266/84-04-00 Inadvertent reactor protection system actuation.
- 301/82-04-01 Containment isolation valve leakage in excess of Technical Specification limit.
- 301/83-08-01 Containment air monitors inoperable.
- 301/83-09-00 Steam flow channel 2FT-474 drifting low.
- 301/83-10-00 Degraded condition of MSR valve.
- 301/83-11-00 Failure of RHR pump 2P10B.
- 301/84-03-00 Inadvertent safety inspection actuation.

7. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the Bulletin was received by licensee management and reviewed for its applicability to the facility. If the Bulletin was applicable the inspector verified that the written response was within the time period stated in the Bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presented in the Bulletin and the licensee's response, that the licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

- 82-02 Degradation of threaded fasteners in the reactor coolant pressure boundary of PWR plants.
- 83-06 Nonconforming materials supplied by Tube-Line Corporation.
- 83-07 Apparently fraudulent products sold by Ray Miller, Inc.
- 84-02 Failures of General Electric type HFA relays in use in Class 1E safety systems.

8. Plant Trips

Following the Unit 2 reactor trip on September 28, 1984, the inspector ascertained the status of the reactor and safety systems by observation of

control room indicators and discussions with licensee personnel concerning plant parameters, emergency system status and reactor coolant chemistry. The inspector verified the establishment of proper communications and reviewed the corrective actions taken by the licensee.

All systems responded as expected, and the plant remained shut down to commence refueling outage number 10.

At 11:37 on September 28, 1984, while performing hot rod drops, reactor power decreased into the source range. Upon automatic energizing of the source range instrumentation, a low detector voltage alarm was received for channel N-31. On investigation, voltage was found to be erratic with no source range counts indicated. In order to prevent possible damage to the preamplifier the instrument fuses were pulled without going to bypass which deenergized the reactor trip by-stable causing a reactor trip. Subsequent evaluation determined that both the detector and the preamplifier had malfunctioned. The procedure for deenergizing a source range channel is available in the control room and specifies placing the channel in bypass prior to removing the instrument fuses.

This is an item of noncompliance. (266/84-15-01(DRP))

9. Receipt of New Fuel

The inspector verified prior to receipt of new fuel that technically adequate, approved procedures were available covering the receipt, inspection, and storage of new fuel; observed receipt inspections and storage of new fuel elements and verified these activities were performed in accordance with the licensee's procedures; and, followed up resolutions of deficiencies as found during new fuel inspections.

10. Preparation for Refueling

The inspector verified that technically adequate procedures were approved for the Unit 2 refueling number 10. The inspector verified that the licensee had submitted a proposed core reload technical specification change to NRR (or that the licensee's 10 CFR 50.59 safety evaluation of the reload core showed that prior NRR review is not required). The inspector also reviewed the licensee's program for overall outage control.

11. Independent Inspection

The licensee made a red phone report on August 31, 1984, to inform the NRC of a situation which, although not specifically reportable under 10 CFR 50.72, could be of significant safety concern. While doing their review of the unit 2 reload transition safety report for use of optimized fuel assemblies the plant staff found that the accident analysis for a continuous rod withdrawal transient from a subcritical condition assumed one reactor coolant pump running. At that time no Point Beach administrative controls or technical specifications prohibited hot subcritical operations without a reactor coolant pump running. This condition is actually established by procedure during each cycle startup for hot rod drop testing.

In subsequent correspondence with Westinghouse the licensee determined that operation at hot shutdown without a coolant pump running is an unanalyzed condition. When asked why Point Beach's technical specifications would allow operation in an unanalyzed condition, Westinghouse stated that at the time of drafting of the Point Beach technical specification, "it was simply missed that a specification must directly address the number of loops in operation at less than 1% criticality". Further investigation disclosed that standardized technical specifications allow no flow conditions for up to an hour, presumably to accommodate situations such as startup physics testing.

Pending ultimate resolution of this matter, the licensee has initiated a special order to the plant operating staff to ensure that either a reactor coolant pump be running or the reactor trip breakers be open when the plant is in a hot shutdown condition. Further licensee actions include determining the cost of a rod withdrawal at no flow analysis and determine whether such operating flexibility is desirable for situations such as plant startup with station blackout and development of a technical specification change request to limit no flow subcritical operations.

#### 12. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection period and summarized the scope and findings of the inspection activities. The licensee acknowledged these findings.