

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-266/85019(DRP); 50-301/85018(DRP)

Docket Nos. 50-266; 50-301

Licenses No. DPR-24;DPR-27

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

Facility Name: Point Beach Unit 1 and 2

Inspection At: Two Creeks, Wisconsin

Inspection Conducted: October 1 through November 30, 1985

Inspectors: R. L. Hague
R. J. Leemon

Approved By: *I. N. Jackiw*
I. N. Jackiw, Chief
Reactor Projects Section 2B

12/14/85
Date

Inspection Summary

Inspection on October 1 through November 30, 1985 (Report Nos. 50-266/85019(DRP); 50-301/85018(DRP))

Areas Inspected: Routine, unannounced inspection by resident inspectors of operational safety; maintenance; surveillance; refueling activities; surveillance - refueling; spent fuel pool activities; maintenance program implementation; organization and administration; IE bulletin follow-up; and licensee event report follow-up. The inspection involved a total of 361 inspector-hours onsite by two inspectors including 56 inspector-hours on off-shifts.

Results: No items of noncompliance or deviations were identified.

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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 Service
- 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
- *J. E. Knorr, Regulatory Engineer

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

*Denotes personnel attending exit interviews.

2. Operational Safety Verification and Engineered Safety Features System Walkdown (71709 and 71710)

The inspectors observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of October and November, 1985. During these discussions and observations, the inspectors ascertained that the operators were alert, cognizant of plant conditions, attentive to changes in those conditions, and took prompt action when appropriate. The inspectors verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the Unit 2 Containment, the Auxiliary 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 inspectors, by observation and direct interview, verified that the physical security plant was being implemented in accordance with the station security plan.

The inspectors observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the months of October and November 1985, the inspectors walked down the accessible portions of the Auxiliary Feedwater, Vital Electrical, Diesel Generating, Component Cooling, Safety Injection, and Containment Spray systems to verify operability.

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.

On October 2, during full power operation, a low feedpump suction alarm came in on Unit 2. Operators immediately started a power reduction to approximately 20% power preventing a reactor trip on low S/G level. The cause of the feedpump low suction pressure was the malfunctioning of the heater drain tank pump discharge valve which failed closed. The valve was repaired and the Unit was returned to 100% power. During the transient, the alarm for low rod insertion bank D came in. Although a check of Technical Specifications revealed actual rod insertion limits were not exceeded, the licensee committed to include a warning in the Significant Operating Event report, to be used for training, that insertion limits are most critical at end of life and although the low low alarm is set approximately 10 steps above the Technical Specification limit, this parameter must be actively considered during the recovery from such a transient.

Unit 2 was taken off-line at 2:11 a.m., October 5, 1985, to start refueling 11. At 6:37 a.m. on November 21, 1985, the Unit was taken critical completing the refueling outage. Major evolutions accomplished during the outage included condenser tube replacement, feedwater heater replacement, split pin inspection and replacement of those with indications. The Unit was placed on line at 9:16 p.m. on November 24, 1985, and was taken off line at 7:53 a.m., November 25, for turbine overspeed testing. After successful overspeed testing, the Unit was again placed on line at 9:57 a.m. on November 25, 1985.

At 2:29 p.m. on October 2, 1985, at the completion of a Unit 1 containment inspection at 100% power, while the operators were leaving the upper air lock, both air lock doors were open at the same time for a period of about 10 seconds. The containment was at a slightly negative pressure so air flow was into containment. At 1530, maintenance personnel attempted to enter the air lock to investigate the malfunction of the interlocks. Upon opening the outer door, the inner door again came off it's seat and was immediately reclosed. Again air flow was into containment. Inspection of the interlock disclosed that the cam mechanism which prevents both doors from being open at the same time was bent and misaligned sufficiently to allow both doors to be operated. On October 3, 1985, maintenance personnel entered containment through the lower air lock and placed dogging devices on the inner upper air lock door. This prevented the inner door from inadvertently opening again when they opened the outer door to affect repairs to the interlock. The interlock was repaired and tested satisfactorily.

3. Monthly Surveillance Observation (61726)

The inspector observed technical specifications required surveillance testing on the Reactor Protection and Safeguards Analog Channels and Nuclear Instrumentation and verified that testing was performed in accordance with adequate procedures, the 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 or reviewed portions of the following test activities:

TI-01 Inservice Testing of High Head Safety Injection Pumps and Valves
WMTP 6.1 Core Power Distribution
REI 6.0 Flux Mapping

At 10:07 a.m., October 9, Unit 1 experienced a momentary runback from 100 to 97.5% power. The runback occurred during the performance of ICP 2.7, N42 Power Range Surveillance Testing, an instrument and control technician was performing a procedure step which called for returning the operation selector switch to normal. The technician inadvertently returned the runback bypass switch to normal. He immediately realized his error and returned the switch to the bypass position terminating the runback after about .75 seconds.

4. Monthly Maintenance Observation (62703)

Station maintenance activities on 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:

Removal and Inspection of Unit 2 "A" Reactor Coolant Pump Motor

Steam Generator Safety Valve Testing

Rebuilding Unit 2 Containment Snubbers

5. Refueling Activities (60710)

The inspector verified that prior to the handling of fuel in the core, all surveillance testing required by the Technical Specifications and licensee's procedures had been completed; verified that during the outage the periodic testing of refueling related equipment was performed as required by Technical Specifications; observed 5 shifts of the fuel handling operations (removal, inspection and insertion) and verified the activities were performed in accordance with the Technical Specifications and approved procedures; verified that containment integrity was maintained as required by Technical Specifications; verified that good housekeeping was maintained on the refueling area; and, verified that staffing during refueling was in accordance with Technical Specifications and approved procedures.

6. Surveillance - Refueling (61701)

The inspector observed refueling outage related surveillance testing on Unit 2 to verify that the tests were covered by properly approved procedures; that the procedures used were consistent with regulatory requirements, licensee commitments, and administrative controls; that minimum crew requirements were met, test prerequisites were completed, special test equipment was calibrated and in service, and required data was recorded for final review and analysis; that the qualifications of personnel conducting the test were adequate; and that the test results were adequate. The inspector witnessed all or portions of the following tests:

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| ORT No. 1 | "Flow Test of Safety Injection Pumps" |
| ORT No. 2 | "Flow Test of RHR Pumps" |
| ORT No. 3 | "Safety Injection Actuation with Loss of Engineered Safeguards AC" |
| TS No. 30 | "High and Low Head Safety Injection Check Valve Leakage Test" |

At 7:35 a.m., October 5, after the completion of hot rod drop testing on Unit 2, rod D-10 was dropped and stuck at 178 steps. This rod had dropped successfully during the surveillance testing. The rod was stepped out three steps and out motion was verified. The rod was then stepped in successfully past the point at which it had stuck. During the refueling outage the guide tube, control rod, and drive shaft were inspected. No abnormalities were identified. The control rod was replaced from spares and post refueling rod drop testing was performed satisfactorily.

During the outage, steam generator tube eddy current testing was accomplished. Details of the scope of the inspection are given in Licensee Event Report 50-301/85-003. The licensee plugged 10 tubes in the "A" steam generator and 44 tubes in the "B" steam generator. Also during

the outage, ultrasonic testing of the guide tube split pins was accomplished. One additional split pin was found to have a retractable indication, three others had been identified during the last outage. All four split pins were replaced.

7. Spent Fuel Pool Activities (86700)

During the operating cycle, it was noted that primary coolant activity for Unit 2 took a step increase in July, about halfway through the cycle. Although actual activity levels remained below .1 uc/cc, which is less than 10% of the Technical Specification limit, some fuel damage was suspected due to the abnormal step increase. After the fuel offload, a visual inspection of the fuel assemblies disclosed two assemblies, L56 and L59, which exhibited significant flow induced fretting primarily at the grid straps, but also at other locations along the rodlets. Assemblies L56 and L59 had been located at core positions M6 and F1 respectively. These core positions represent two of eight positions at which the baffle plate joint is formed with a rabbet joint which had been peened over in 1977 to prevent this type of flow induced fuel damage. The differential pressure across the baffle plates varies from 15-25 lbs./sq.in. at the top to 3-5 lbs./sq.in. at the bottom. Therefore, any gapping of the joints would allow coolant to flow from outside the baffles into the fuel area. It appears that a gap of approximately two thousandths of an inch will produce a nozzle effect which, if directed at a fuel rodlet, can cause the rodlet to vibrate against the grid straps or the baffle plates causing wear and eventually a breach of the cladding. Possible fixes to avoid release of fission products to the coolant include replacing fuel rodlets in the affected areas with empty rodlets, repeening of the joint to close the gaps, and a Westinghouse modification which reduces the differential pressure across the baffles. All of the fixes considered by the licensee involve a significant man-REM expenditure and in as much as wear and cladding failure is a gradual process which can be effectively monitored through coolant sampling, the licensee decided not to attempt any of the fixes this outage. Coolant activity will be monitored closely during this cycle and the licensee will continue to study possible solutions to the problem. This issue is presently being carried as an open item for Unit 1.

8. Maintenance Program Implementation (62700)

The inspector verified that the maintenance program was being implemented in accordance with regulatory requirements. The effectiveness of the maintenance program on important plant equipment and the ability of the maintenance staff to conduct an effective maintenance program was evaluated.

The following maintenance activities were observed/reviewed:

Replacement of a Source Range Detector

Replacement of a Power Range Detector

Replacement of Unit 2 Steam Generator "B" High and Low Level Relay

SMP G23, "Unit 2 Control Board Modification 84-292 and Reactor Trip Breaker Modification Addendum 8-292-0, Reactor Trip Breaker Pushbutton and Breaker Position Indicator Installations and Shunt Trip Test Jack Installation"

Heater Drain Tank Valve 2-CV-2532A (Repair of Valve)

Diesel Generator Glycol-Cooler HX55B (Cleaning, Inspection and Replacement of the Tubes)

Red Instrument Bus Inverter 1DY01 (Perturbation on Red Bus Causing a Turbine Runback)

The review of the above maintenance activities included interviews with maintenance personnel and supervisors, review of the completed work packages to ensure that proper documentation of work and spare parts were complete and in accordance with procedures, and that an effective preventative maintenance program is in place.

9. Organization and Administration (36700)

The inspector ascertained that changes made to the licensee's onsite organization were in conformance with the requirements of the Technical Specifications and that the licensee's use of overtime was in conformance with regulatory requirements. The inspection included verification that the licensee's onsite organization is functioning as described in the Technical Specifications, that personnel qualification levels are in conformance with applicable codes or standards, that lines of authority and responsibility are in conformance with Technical Specifications and that deviations from maximum overtime limits were authorized in accordance with procedures.

10. IE Bulletin Followup (92701)

The inspector verified that for the below listed bulletin no licensee action was required. However, the bulletin was routed to cognizant individuals for information.

IEB 85-02 Undervoltage Trip Attachments of Westinghouse DB-50 Type Reactor Trip Breakers

11. Licensee Event Reports Followup (92700)

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.

266/85006	Nuclear Instrumentation Turbine Runback
266/85007	Nuclear Instrumentation Turbine Runback
266/85008	Momentary Loss of Containment Integrity
266/85009	Nuclear Instrumentation Turbine Runback
301/85003	Degradation of Steam Generator Tubes

12. Exit Interview (30703)

The inspectors met with licensee representatives (denoted in Paragraph 1) throughout the inspection period and at the conclusion of the inspection period to summarize the scope and findings of the inspection activities. The licensee acknowledged the inspectors' comments. The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents/processes as proprietary.