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

REGION III

Report No. 50-266/80-22; 50-301/80-22

Docket No. 50-266; 50-301 License No. DPR-24; DPR-27

Licensee: Wisconsin Electric Power Company
231 West Michigan
Milwaukee, WI 53201

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

Inspection At: Point Beach Site, Two Creeks, Wisconsin

Inspection Conducted: December 1-5, 8-12, 15-19, 22-23, 27, 29-31, 1980

Inspectors: RFW for
W. G. Guldemond Jan 21, 1981

RFW for
R. L. Hague Jan 21, 1981

Approved By: RFW Warnick
R. F. Warnick, Chief
Reactor Projects Section 3 Jan 21, 1981

Inspection Summary

Inspection on December 1-5, 8-12, 15-19, 22-23, 27, 29-31, 1980 (Report No. 50-266/80-22; 50-301/80-22)
Areas Inspected: Routine Resident Inspection of Operational Safety Verification, Monthly Maintenance Observation (Unit 2), Monthly Surveillance Observation (Unit 1), Followup on Licensee Event Reports, IE Bulletin and Circular Followup, Review of Plant Operations, Followup on Items of Noncompliance, Preparation for Refueling (Unit 1), Refueling Activities (Unit 1), Maintenance (Unit 1), and Plant Trips (Unit 1). The inspection involved a total of 225 inspector-hours onsite by two inspectors including 57 inspector-hours on offshifts.
Results: Of eleven areas inspected, there were no items of noncompliance in ten areas. In one area, refueling activities, one item of noncompliance was identified (Unit 1 - Failure to Obtain New Baseline Data Following an Interruption in Refueling Activities - Severity Level VI, Paragraph 11).

DETAILS

1. Persons Contacted

*G. A. Reed, Manager, Nuclear Power Division
*R. E. Link, Assistant to the Manager
T. J. Koehler, Operations Superintendent
J. C. Reisenbuechler, I&C Engineer
R. R. Weedon, Health Physicist
J. J. Zach, Superintendent Technical Services
*F. A. Zeman, Office Supervisor

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

*Denotes those present at exit interview.

2. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the month of December. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the Unit 1 reactor building and both turbine and auxiliary 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 month of December, the inspector walked down the accessible portions of the safety injection, containment spray and auxiliary feedwater 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.

No items of noncompliance were identified.

3. Monthly Maintenance Observation

Station maintenance activities of the safety related component listed below was observed/reviewed to ascertain that it was 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 was performed prior to returning the component 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 activity was observed/reviewed:

Seal repairs on the 2P15A Safety Injection Pump.

Following completion of maintenance on the 2P15A Safety Injection Pump, the inspector verified that the system had been returned to service properly.

No items of noncompliance were identified.

4. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the source range instruments for Unit 1, safety injection with loss of AC power 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.

During the safety injection with loss of AC power the 4D diesel generator started normally but its output breaker would not close on the deenergized safeguards bus. The diesel had successfully been tested to a Unit 2 safeguards bus earlier in the day. Investigation revealed that two relays in parallel in the breaker closing circuit were not closing thus preventing the breaker from closing. These same relays control breaker closing to Unit 2 such that the diesel could not have supplied power to either Unit's safeguard buses if called upon to do so. The relays were adjusted and the test was completed satisfactorily.

No items of noncompliance were identified.

5. 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.

Docket No.	Report No.	Title
50-301	80-012	Overheated Pump Seal on 2P15A Safety Injection Pump
50-301	80-011	Failure to Lower a High Flux Setpoint
50-301	80-010	Coupling Failure on 2P15A Safety Injection Pump
50-266	80-014	Steam Generator Tube Degradation

6. IE Bulletin Followup

For the IE Bulletins listed below 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 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.

79-06 Review of Operator Errors and System Misalignments Identified During the TMI Incident*

80-23 Failures of Solenoid Valves Manufactured by Valcor Engineering Corporation

7. IE Circular Followup

For the IE Circulars listed below, the inspector verified that the Circular was received by the licensee management, that a review for applicability was performed, and that if the circular were applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

80-21 Regulation of Refueling Crews

80-22 Confirmation of Employee Qualification

*Superseded by IEB 79-06A

80-23 Potential Defects in Beloit Power Systems Emergency Generators

8. Review of Plant Operations

During the month of December the inspector reviewed the following activities:

a. Review and Audits

On December 1, 1980, the inspector sat in on a safety review committee meeting. The inspector verified that provisions of technical specifications dealing with membership, review process, frequency, and qualifications were met. The inspector also verified that decisions made were reflected in the meeting minutes and that corrective actions proposed were taken.

b. Emergency Preparedness

The inspector visited the Two Rivers Community Hospital, toured the emergency facilities, and verified that the agency was familiar with their role in the emergency plan.

9. Plant Trips

At 4:34 a.m. and 3:42 p.m. on November 26, 1980 Unit 1 experienced reactor trips from 80% power initiated by a low level in the "A" steam generator (S/G) coincident with a steam flow-feed flow mismatch (See Inspection Report 50-266/80-20 and 50-301/80-20). Immediately prior to the trips severe vibrations were noted in the feed system. The vibrations preceeding the second trip were more severe than those preceeding the first trip. Post trip investigations revealed that the "A" S/G feedwater regulating valve (FWRV) ramped shut over a time interval of approximately 30 seconds, causing a reduction in feed flow to the "A" S/G. This lead to the low level and associated trip. The FWRV apparently shut in response to a loss of control air pressure. It was not immediately determined whether the valve closures were the cause or the result of the vibrations experienced in the feed system.

A feedwater system walkdown by the inspector subsequent to the second trip showed significant amounts of damaged lagging, a broken mounting ring for the air operator for "B" FWRV bypass valve, a broken mounting ring for the air operator for the "A" main feed pump (MFP) minimum recirculation valve, two loose pipe hangers on the "A" MFP minimum recirculation line, two loose pipe hangers on the main feedwater lines to "A" and "B" S/G outside containment, damaged grouting under pipe supports on both the "A" and "B" main feed headers in the vicinity of the FWRV's, and, later, loose lagging on "B" main feed line inside containment. Following the second trip, the unit remained shut down for the scheduled refueling.

In response to the trips and feed system vibrations, the licensee undertook an investigative program including disassembly and inspection of both "A" and "B" FWRV's, the 5A and 5B high pressure feedwater heaters, the discharge check valves on "A" and "B" MFP's, consultation with the FWRV vendor, and a limited nondestructive examination of high stress sections of main feedwater piping.

This program turned up the following items. Pieces of nuts identified as coming from the high pressure feedwater heater flow divider plates were found in the "B" FWRV disk guide cage. Pieces of what appeared to be a bushing were found in the inlet plenum of the 5A feedwater header. The disk pivot bushings on the discharge check valve for the "A" MFP were found worn and broken. The pieces of bushing material found in the feedwater heater, combined with a similar piece found in the same location in 1978 and what remained in the MFP check valve, made a complete bushing assembly. It was also noted that the mechanical open stop arm for the "A" MFP discharge check valve was significantly worn.

As a result of the above findings, the licensee attributed the feed system vibrations to flow oscillations and mechanical hammering set up by the disk on the "A" MFP discharge check valve. It is surmised that this vibration reached a frequency sympathetic with the feed system as a whole causing the severe vibrations noted prior to the trips.

The feed pump discharge check valve for "B" main feed pump was disassembled and inspected. Only normal wear was observed. The nondestructive examination of the feedwater header showed no related system damage.

The licensee considers the failure of the bushing on the MFP discharge check valve to be due to normal wear and does not plan to contact the vendor (Crane). The event as a whole is not reportable per the Technical Specifications and a Licensee Event Report will not be filed. The MFP discharge check valves have been added to the periodic inspection program by the licensee.

No items of noncompliance were identified.

10. Preparation for Refueling (Unit 1)

The inspectors reviewed the licensee's preparations for the refueling of Unit 1 to determine the adequacy of those preparations including procedures and administrative controls for refueling activities and the outage and receipt of new fuel.

Documentation of inspection of receipt of new fuel was made in Inspection Report 50-266/80-15. In preparation for this inspection, procedures for receipt, inspection and storage of new fuel were reviewed and found to be technically adequate. No items of noncompliance were identified.

Prior to and continuing up to the commencement of refueling operations for Unit 1 the inspectors verified the technical adequacy of approved procedures for fuel handling, transfers, core verification, inspection of fuel to be reused, and fuel sipping operations. Also reviewed was the licensee's refueling manual which contained checklists for prerequisites for major phases of the refueling and recovery, and lists of all testing to be performed. The only question raised by the inspector was the location in the procedure of a requirement to ensure containment integrity for fuel movement prior to reinstallation of the reactor vessel head and cavity draining. The licensee agreed to review this matter.

The safety evaluation to verify that the reload core did not require NRR review or involve an unreviewed safety question was not completed prior to the commencement of the refueling outage. This was due to the uncertain extent of the refueling activities as dictated by ancillary scheduling concerns. The detailed evaluation was commenced as soon as the exact extent of the refueling was determined and was completed prior to unit criticality.

11. Refueling Activities (Unit 1)

The inspectors monitored Unit 1 refueling activities to verify that pre-refueling activities specified in the Technical Specifications were completed and that refueling activities were conducted as required by Technical Specifications and approved procedures. Included in this activity were verification of completion of all pre-refueling required Technical Specification surveillance testing, observation of four shifts of refueling activities from the refueling platform, and verification of compliance with Technical Specification and procedural requirements during refueling activities.

During two shifts of actual fuel movements monitored by the inspectors, no items of noncompliance were identified. All activities were conducted in accordance with approved procedures, containment integrity was maintained as required, housekeeping in the refueling area was excellent, staffing was in accordance with requirements, and health physics involvement and control were excellent. Review of the refueling manual which contained checklists of prerequisites for major phases of the outage showed that some items, though complete, were not initialed as such. Thus the manual was not effectively utilized at all times to track the outage. The licensee agreed to follow this item more carefully.

Review of events coincident with an approximately six hour suspension of refueling activities between 7:30 p.m. on December 6 and 2:11 a.m. on December 7 while repairs were being effected on the manipulator crane revealed that normalized baseline data was not obtained prior to resumption of refueling activities. This data is required to be obtained by refueling procedure RP-1C any time loading operations are suspended for more than four hours. This requirement was overlooked

on resumption of loading operations. A review of inverse count rate data before and after the suspension of activities showed no significant changes. This is an item of noncompliance.

The licensee routed an internal memorandum reminding all personnel of the requirement to obtain new baseline data if loading operations are suspended for more than four hours. This item is considered closed and no response is required.

12. Maintenance (Unit 1)

The inspectors reviewed the steam generator leak testing and eddy current inspection associated with the Unit 1 outage to ascertain whether it was conducted by qualified personnel in accordance with approved procedure. This included direct observation and review of documentation associated with the testing and inspections.

No items of noncompliance were identified.

At the time of this report the inspectors were also reviewing the results of steam generator safety valve and snubber maintenance. The results of this review will be included in a future inspection report.

13. Followup on Items of Noncompliance

Licensee response to the inspection reports noted below was reviewed to ascertain that corrective actions for items of noncompliance were completed and in conformance with regulatory requirements.

a. (Closed) 50-266/80-10, 50-301/80-10 Infraction, Improper Labelling of a Potentially Contaminated Tank. This item of noncompliance has been withdrawn based on a determination of the Region III Fuel Facility and Materials Safety Branch.

b. (Closed) 50-266/80-10, 50-301/80-10 Infraction, Improper Controlled Zone Entry. This item of noncompliance was reduced from an infraction to a deficiency. Issuance of Health Physics Information Sheet 80-04, "Control of Radiological Boundaries," provided the necessary reemphasis to all personnel.

c. (Closed) 50-301/80-10 Emergency Safeguards Feature Buses Cross Connected. Operations Refueling Test Procedure No. 3 has been modified to include verification of the proper breaker lineup.

14. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) through 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.