

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-266/92015(DRP); 50-301/92015(DRP)

Docket Nos. 50-266; 50-301

Licenses No. DPR-24; DPR-27

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

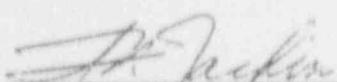
Facility Name: Point Beach Units 1 and 2

Inspection At: Two Rivers, Wisconsin

Dates: June 29 through August 23, 1992

Inspectors: K. R. Jury  
J. Gadzala  
J. Gavula

Approved By:



I. N. Jackiw, Chief  
Reactor Projects Section 3A

07-07-1992  
Date

Inspection Summary

Inspection from June 29 through August 23, 1992, (Reports No. 50-266/92015 (DRP); No. 50-301/92015(DRP))

Areas Inspected: Routine safety inspection by resident inspectors of corrective actions on previous findings; plant operations; radiological controls; maintenance and surveillance; emergency preparedness; security; engineering and technical support; safety assessment/quality verification; and Temporary Instruction (TI) 2515/115.

Results: One violation of NRC requirements and one unresolved item was identified. An Executive Summary Follows.

Plant Operations

Both units operated at rated power throughout the report period with the exception of dispatcher requested power reductions.

A Temporary Waiver of Compliance (TWOC) was requested on August 18, due to inadequate seismic qualification of Unit 1 analog instrumentation racks. The TWOC was verbally granted later that day and formally issued on August 19.

The instrument racks were modified to be seismically qualified and were declared operable on August 21. The circumstances surrounding initial identification of this issue remain unresolved.

The plant has started to find evidence of zebra mussels in various cooling water systems, although the overall infestation remains minor.

The labor contract covering about 170 plant personnel expired on August 15. The contract was extended day to day while contract negotiations continued.

#### Radiological Controls

An initiative minimizing anti-contamination clothing requirements in the controlled area has been successful.

#### Maintenance/Surveillance

On July 24, a battery cable on the G-501 auxiliary diesel was found reconnected to the battery despite an attached red safety tag prohibiting this condition. This was a violation of the plant's equipment isolation procedure. A contractor unfamiliar with the procedural requirements had reconnected the cable after completing work on the system. No injury or equipment damage occurred as a result.

#### Engineering and Technical Support

During the evaluation of a bolt failure on the emergency diesel generator (EDG) exhaust piping flange, it was determined that the existing configuration caused unacceptable stresses in the flange bolts during normal operation. In addition, it was determined that the bolts would exceed allowable stresses during a design basis seismic event. The configuration was evaluated and determined to meet previously approved interim operability criteria and was therefore considered operable. Corrective actions to bring bolt stresses into compliance will include modifying the exhaust piping supports and expansion joint location.

#### Safety Assessment/Quality Verification

The inspector attended a meeting of the Off Site Review Committee (OSRC). The committee's discussions were candid and constructive and were not dominated by the plant staff. The meeting was well documented and action items clearly identified and tracked. Overall, the inspector considered the OSRC's reviews to be effective.

A sample of required room entries was compared against security access records. There was no indication that individuals performing the surveillance and log entries had falsified any records.

## DETAILS

### 1. Persons Contacted (71707) (30702)

\*G. J. Maxfield, Plant Manager  
\*J. C. Reisenbuechler, Manager - Operations & Technical Support  
T. J. Koehler, Manager - Maintenance & Engineering  
N. L. Hoefert, Manager - Operations  
J. G. Schweitzer, Manager - Maintenance  
J. A. Palmer, Manager - Instrument & Controls  
W. J. Herrman, Manager - Technical Services  
T. L. Fredrichs, Manager - Chemistry  
J. J. Bevelacqua, Manager - Health Physics  
R. D. Seizert, Manager - Training  
J. F. Becka, Manager - Regulatory & Staff Services  
\*F. A. Flentje, Administrative Specialist

Other employees were also contacted including members of the technical and engineering staffs, and reactor and auxiliary operators.

\*Denotes the personnel attending the management exit interview for summation of preliminary findings.

### 2. Corrective Action on Previous Inspection Findings (92702)

- a. (Closed) Violation (266/91019-02): Improper Restoration of Inverter to Service.

The licensee's response to the violation, dated November 27, 1991, was reviewed and found to be acceptable. The implementation of the specified corrective actions were verified. Procedure RMP 45, "Elgar Instrument Bus Inverters", Revision 11, dated January 31, 1992, was reviewed and found to contain explicit equipment specific instructions. Also the installation of permanent placards at the inverter supply breakers containing appropriate caution statements was verified. This item is closed.

### 3. Plant Operations (71707) (93702) (92709)

The inspectors evaluated licensee activities to confirm that the facility was being operated safely and in conformance with regulatory requirements. These activities were confirmed by direct observation, facility tours, interviews and discussions with licensee personnel and management, verification of safety system status, and review of facility records.

To verify equipment operability and compliance with technical specifications (TS), the inspectors reviewed shift logs, operation's records, data sheets, instrument traces, and records of equipment malfunctions. Through work observations and discussions with Operations staff members, the inspectors verified the staff was knowledgeable ("

plant conditions, responded promptly and properly to alarms, adhered to procedures and applicable administrative controls, was cognizant of in-progress surveillance and maintenance activities, and was aware of inoperable equipment status. The inspectors performed channel verifications and reviewed component status and safety related parameters to verify conformance with TS. Shift changes were observed, verifying that system status continuity was maintained and that proper control room staffing existed. Access to the control room was restricted and operations personnel carried out their assigned duties in an effective manner. The inspectors also noted professionalism in most facets of control room operation.

Plant tours and perimeter walkdowns were conducted to verify equipment operability, assess the general condition of plant equipment, and to verify that radiological controls, fire protection controls, physical protection controls, and equipment tag out procedures were properly implemented.

a. Units 1 and 2 Operational Status

Both units continued to operate at full power during this period with only dispatcher requested and turbine valve testing power reductions.

b. Zebra Mussels

The plant has started to find evidence of zebra mussels in various cooling water systems. Shells have been found in heat exchangers and live mussels have been found in the water intake structure. The overall infestation remains minor. Extended chlorination of cooling water systems has been initiated in an attempt to control the spread of mussels.

c. Strike Contingency

The labor contract covering maintenance and health physics personnel, licensed and non licensed operators (excluding SROs), expired at midnight on August 15. Approximately 170 people onsite are affected by this contract. The contract was extended day to day while contract negotiations continued. A 72-hour notification of intent to strike was agreed to by the union as part of the contract extension. Plant operations remained normal and no unusual activity was observed. The inspector reviewed the company's strike contingency plans and will continue to monitor negotiation progress.

d. Telephone Procedure

The plant's telephone procedure was changed August 21 such that telephone calls coming in to the switchboard after normal working hours are no longer directed to the control room for processing. Instead, the calls are now transferred to the corporate security

desk for handling. This relieves the control room of the distractions normally associated with this task.

4. Radiological Controls (71707)

On July 22, the plant changed the dress requirements for entry into the radiologically controlled area. The requirement for wearing shoe covers, lab coat, and surgeon's cap for general access was eliminated. The plant's efforts at controlling the spread of contamination and a trial run wherein shoe covers were surveyed for contamination upon exit from the controlled area proved successful and led to this latest change. This new policy is expected to further reduce the amount of radwaste volume generated at the plant.

All activities inspected were conducted in a satisfactory manner.

E. Maintenance/Surveillance Observation (62703) (61726)

a. Maintenance

The inspectors observed safety related maintenance activities on systems and components to ascertain that these activities were conducted in accordance with TS, approved procedures, and appropriate industry codes and standards. The inspectors determined that these activities did not violate limiting conditions for operation (LCO) and that required redundant components were operable. The inspectors verified that required administrative, material, testing, and radiological and fire prevention controls were followed.

In particular, the inspectors observed/reviewed the following maintenance activities:

- IWP 92-094 (Revision 0), Diesel Control Cabinet C-34/C-35 Base Mounting  
Good engineering support was noted throughout this evolution.
- IWP 92-122 (Revision 0), Seismic Support for the Unit 1 Instrumentation Panels
- MWR 924376, Troubleshooting of Reactor Trip Breaker Blown Fuse
- JCW-57A Check Valve Repair
- G-05 Gas Turbine Generator Overhaul

The gas turbine overhaul is scheduled for completion by the end of September. Compliance with the station blackout rule is required by November 1992 and will require demonstrating that the gas turbine can achieve 95 percent reliability.

### Operation of Safety Tagged Equipment

On July 24, the licensee found that a battery cable on the G-501 auxiliary diesel had been reattached to the battery. Danger tag No. 8 of series 92-552, which was attached to the cable, specifically prohibited this configuration. The plant performed a review of this event and determined that a contractor, having completed his work on the auxiliary diesel had reconnected the battery cable. The contractor stated that he read the prohibition written on the tag against equipment operation, but he did not understand that this precluded him from connecting the cable. The tag did state that the required position of the battery cable was to be disconnected.

Procedure PBNP 4.13, Equipment Isolation Procedure, step 6.2.3, requires that equipment not be returned to service until the danger tag location sheet authorizes the return of the equipment to the operations group. Also, step 6.4 requires that positioning a component per the danger tag location sheet shall be performed by a qualified red tagger. Actions taken by the contractor did not comply with these requirements. This is a violation (266/92015-01).

Previously, mispositioned danger-tagged equipment had been discovered in the gas turbine building but the circumstances were believed to be unrelated and the person responsible was not identified. During an incident investigation into this prior event, the plant determined that their oversight of short term contractors in this aspect was weak. Short term contractors do not receive general employee training, which includes the equipment isolation system, and are escorted while performing their work. In the past, the escorts have normally been security personnel, who ensure that security requirements are met but do not ensure that other plant requirements are fulfilled.

Although the battery cable incident occurred July 24 and the investigation report was not issued until August 6, the licensee had not implemented any interim corrective actions regarding oversight of contractors as of August 23. The inspector surveyed all other danger tags hanging in the gas turbine building and found no further discrepancies.

### b. Surveillance

The inspectors observed certain safety related surveillance activities on systems and components to ascertain that these activities were conducted in accordance with license requirements. For the surveillance test procedures listed below, the inspectors determined that precautions and LCOs were followed, the required administrative approvals and tagouts were obtained prior to test initiation, testing was accomplished by qualified personnel in accordance with an approved test procedure, test instrumentation was properly calibrated, the tests were completed at the required frequency, and that the tests conformed to TS requirements. Upon test completion, the inspectors verified the recorded test data

was complete, accurate, and met TS requirements; test discrepancies were properly documented and rectified; and that the systems were properly returned to service.

Specifically, the inspectors witnessed/reviewed selected portions of the following test activities:

- Special Order 92-04 (Revision 0), Operation of the Temporary Diesel Generator (G-10) for Alternate Shutdown
- TS-74 (Revision 13), Annual Underground Fire Main Flow Test
- TS-2 (Revision 34), Emergency Diesel Generator G02 Biweekly

Part of this surveillance required the drawing of a lube oil sample in accordance with procedure 01-92. The operator experienced minor difficulty evaluating the viscosity of the sample due to ambiguity in this procedure. No direction was specified as to how long the temperatures of the oil in the viscosimeter should stabilize before taking a reading and no guidance was provided regarding viscosity readings higher than that of new oil (as was the case observed). This observation were discussed with plant staff.

- IICP 2.3A (Revision 2), Reactor Protection System Logic Monthly Surveillance Test

No significant discrepancies were observed during any of the above tests.

## 6. Engineering and Technical Support (71707) (37828)

The inspectors evaluated engineering and technical support activities to determine their involvement and support of facility operations. This was accomplished during the course of routine evaluation of facility events and concerns, through direct observation of activities, and discussions with engineering personnel.

### a. Instrument Cabinet Seismic Mounting Inadequacy (71707) (37828)

On August 18, the company notified the NRC via the Emergency Notification System that the Unit 1 analog instrumentation racks were not adequately seismically mounted. These racks were consequently declared inoperable, requiring the plant to enter into a three-hour LCO as the configuration was outside of the TS and plant design bases.

The company requested and was granted a temporary waiver of compliance from this LCO for a period of 72 hours. This allowed the plant to effect repairs on the cabinets without requiring the unit to be subjected to a thermal transient by shutting it down.

The affected cabinets are located in the control room and house the reactor protection, rod position indication, nuclear instrumentation, incore thermocouple, and other control system instrumentation. The cabinet numbers are 1C105-1C133 and are arrayed in two rows. Individual cabinets in each row are rigidly bolted together such that each row is considered a single item. These cabinets were installed during initial plant construction and their mounting configuration is not believed to have changed since time.

This initial condition was identified in late June during a walkdown of auxiliary feedwater (AFW) system recirculation controls for the purpose of upgrading the recirculation control valves to safety related status. The Standard Review Plan (NUREG 0800), which was used as the review guide, lists seismic mounting as one of the review criteria. An engineer noted that the cabinet which housed the AFW recirculation valve was not bolted to the floor. This cabinet was in one of the two rows discussed above. Using the Seismic Qualification User's Group (SQUG) methodology, the engineer determined that this cabinet was not adequately mounted. Wisconsin Electric engineers examined the cabinet mounting and found that all the cabinets in that row were bolted together and that the cabinet row was secured to the floor with a total of seven friction clips. These clips are bolted to the concrete floor at one end and slipped over the base of the cabinet at the other end. Plant management's initial determination was that these clips were adequate to restrain the cabinets in the event of a safe shutdown earthquake (SSE). Concurrent with this determination, a detailed evaluation of the cabinets' seismic adequacy was subsequently initiated.

The detailed evaluation was completed August 17 and reviewed by the plant safety staff the following day. The safety staff's review determined that the clips were inadequate (by a factor of three) to restrain the cabinets during an SSE. At this point, the plant declared the cabinets inoperable and entered the appropriate LCO (TS 15.3). An examination of the corresponding Unit 2 cabinets revealed that they were properly bolted directly to the concrete floor and therefore met seismic criteria.

Compensatory actions taken during the course of repairs included suspension of all reactor protection system and engineered safeguards features testing, minimizing unit load changes, and prohibition of any work which could affect operability of the alternate shutdown system.

Corrective action consisted of bolting angle irons to the base of the cabinets on the two long sides of each row. The angle irons were then bolted to the concrete floor using concrete expansion anchors. Work was completed the morning of August 21, before expiration of the temporary waiver. The cabinets were declared operable and the plant exited from the requirements of the

temporary waiver. The inspectors monitored installation of the new mounting brackets and verified implementation of compensatory measures.

The NRC's review of this matter determined that the licensee identified the seismic mounting inadequacies of the instrument cabinets during a programmatic review of the AFW system and has corrected them appropriately. The licensee's formal Seismic Qualification Users Group (SQUG) review is scheduled to commence during Unit 2's refueling outage this September, at which time a more comprehensive review of seismic requirements for plant equipment will take place. Enforcement action for the instrument cabinet seismic mounting inadequacies is currently being reviewed by the NRC as an unresolved item (266/92015-02).

b. Emergency Diesel Generator (EDG) Bolt Failure (71707)

During the evaluation of a bolt failure on the EDG exhaust piping flange, it was determined that the existing configuration caused unacceptable stresses in the flange bolts. The failures, which are discussed in Inspection Reports 266/92012; 301/92012, were attributed to vibrational or thermal loads during the monthly EDG surveillance tests. In addition, it was determined that the bolts could exceed Code allowable stresses during a design basis seismic event; however, the calculated stresses were within interim operability limits.

The company evaluated this condition in Calculation No. 0087-00022-002, "EDG Exhaust Piping Operability". Revision 2, dated July 22, 1992. This calculation was reviewed by the inspector for compliance with licensee commitments and NRC requirements. The calculation demonstrated that the current configuration met previously NRC approved interim operability criteria and therefore was considered operable. The proposed long term solution to the problem was a modification to the exhaust piping supports and expansion joint location. The schedule for this work was being discussed with the NRC to assure that it would be performed at the optimal time from a safety perspective.

7. Safety Assessment/Quality Verification I (40500) (90712) (92700)

Wisconsin Electric's quality assurance programs were inspected to assess the implementation and effectiveness of programs associated with management control, verification, and oversight activities. Special consideration was given to issues which may be indicative of overall management involvement in quality matters such as self improvement programs, response to regulatory and industry initiatives, the frequency of management plant tours and control room observations, and management personnel's attendance at technical and planning/scheduling meetings.

a. Licensee Event Report (LER) Review

The inspectors reviewed LERs submitted to the NRC to verify that the details were clearly reported, including accuracy of the description and corrective action taken. The inspector determined whether further information was required, whether generic implications were indicated, and whether the event warranted onsite follow up. The following LERs were reviewed and closed:

\*266/92-005 Excessive Cooldown Transient  
?66/92-005-01 Excessive Cooldown Transient

These reports describe a cooldown of the Unit 1 reactor coolant system on May 27, 1992, in excess of limits specified in technical specifications. This event was the subject of a special inspection which resulted in the issuance of a Notice of Violation and associated civil penalty. Details are contained in Inspection Reports 266/92014; 301/92014.

\*266/92-006 Failure of Main Steam Isolation Valve IMS-2018 to Fully Shut During Performance of IT-280

This report describes the failure a main steam isolation valve (MSIV) to fully shut while performing a stroke test during startup of Unit 1 following its annual refueling and maintenance outage. Details are contained in Inspection Reports 266/92012; 301/92012. A new valve shaft had been installed during the outage that was made of the same material as the packing follower. Misalignment of the packing follower allowed it to come into contact with the valve shaft and cause it to gall and subsequently bind.

Both MSIVs were disassembled and the packing followers were machined to prevent contact with the valve shaft. Additionally, the width of the carbon spacer on each end of the shaft was cut to further reduce the potential for misalignment of the packing follower. Both valves were reassembled and successfully tested.

\*266/92-003 Inadvertent Start of Emergency Diesel Generator Due to Personnel Error

This report describes the automatic start of emergency diesel generator G01 when an electrical supervisor and maintenance electrician inadvertently deenergized a potential transformer for a 4160 VAC safeguards bus. These personnel did not realize that the potential transformers for both safeguards trains were in the same cubicle and did not read the identification labels prior to opening the access covers. The safeguards bus undervoltage relays sensed the deenergized potential transformer condition as a safeguards bus deenergization and initiated the diesel start.

In addition to counseling the responsible personnel, the plant added appropriate caution statements to the procedures governing

maintenance work on the 4160 VAC safeguards busses. Caution labels were added to the outside of the electrical cubicles alerting operators that both sets of potential transformers are located within. Larger, more readable identification labels were also placed on each potential transformer's access cover. The plant also plans to code the potential transformer labels with their safeguards train colors.

b. LER Follow Up

The LERs denoted by asterisk above were selected for additional follow up. The inspectors verified that appropriate corrective action was taken or responsibility was assigned and that continued operation of the facility was conducted in accordance with Technical Specifications and did not constitute an unreviewed safety question as defined in 10 CFR 50.59. Report accuracy, compliance with current reporting requirements and applicability to other site systems and components were also reviewed.

c. Manager's Supervisory Staff Meeting

The inspector observed sessions 92-12, 92-13, and 92-14 of the Manager's Supervisory Staff. Issues discussed included the temporary replacement for the Technical Support Center backup power supply, emergency diesel generator turbocharger bolt issue, excessive cooldown of Unit 1, Incident Investigations of MSIV failures and red tag violations, independent verification process, operability determinations, and voluntary entry into limiting conditions for operation. A quorum of the staff was present throughout and the meetings were conducted in a satisfactory manner.

d. Off Site Review Committee Meeting

The inspector observed selected portions of meeting 48 of the Off Site Review Committee (OSRC). The required quorum was maintained throughout the meeting and was periodically supplemented by additional persons. Committee members were experienced in various aspects of the nuclear industry and possessed diverse backgrounds extending outside of Region III. Much of the meeting was held onsite at Point Beach and included tours of the plant and one on one interviews with selected individuals by committee members.

The committee reviewed items required by their charter which included pertinent safety issues such as the excessive cooldown event which occurred in May 1992, MSIV failures, and improper EDG sequencing.

The committee's discussions were candid and constructive and not dominated by the plant staff. The meeting was well documented and action items clearly identified and tracked. Overall, the inspector considered the OSRC's reviews to be effective.

8. Temporary Instructions (TI)

a. (Closed) TI 2515/115 Verification of Plant Records

Using the TI for guidance, a representative sample of about 100 required room entries was compared against security access records to determine if practices of individuals performing surveillance and log entries are such that a potential for record falsification exists.

The inspection determined that for each log entry made by a watch stander, security access records showed that the responsible individual was physically present in the appropriate room. Based on this correlation, no record falsification was deemed to have occurred. Additionally, a review conducted by the licensee did not reveal any discrepancies. This TI is closed.

9. Management Meetings (30702)

A meeting was held among NRC Headquarters and Region III management and Wisconsin Electric management on July 9, to discuss items of interest and foster improved communications between Wisconsin Electric and the NRC. Items of discussion included organizational changes at Wisconsin Electric, individual plant examination activities, technical specifications and procedure upgrade programs, electrical issues, gas turbine reliability, current plant performance.

10. Exit Interview (71707)

A verbal summary of preliminary findings was provided to the Wisconsin Electric representatives denoted in Section 1 on August 24, at the conclusion of the inspection. No written inspection material was provided to company personnel during the inspection.

The likely informational content of the inspection report with regard to documents or processes reviewed during the inspection was also discussed. Wisconsin Electric management did not identify any documents or processes that were reported on as proprietary.