

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-266/91024(DRP); 50-301/91024(DRP)

Docket No. 50-266; 50-301

License No. DPR-24;
DPR-27

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

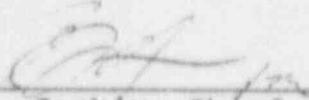
Facility Name: Point Beach Units 1 and 2

Inspection At: Two Rivers, Wisconsin

Dates: November 18, 1991 through January 3, 1992

Inspector: J. Gadzala

Approved By:


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

JAN 21 1992

Date

Inspection Summary

Inspection from November 18, 1991 through January 3, 1992
(Reports No. 50-266/91024(DRP); No. 50-301/91024(DRP))

Areas Inspected: Routine, unannounced inspection by resident inspectors of licensee actions on previous findings; plant operations; radiological controls; maintenance and surveillance; emergency preparedness; security; engineering and technical support; and safety assessment/quality verification.

Results: Of the eight areas inspected, no violations or deviations were identified. One unresolved item was identified regarding applicability of Technical Specification requirements to plant equipment (para 3.g.).

Plant Operations

During this inspection period, Unit 1 operated at full power until November 27 when it was shut down due to a tube break in the main condenser. Repairs were completed and the plant restarted on November 29. Full power was reached the following day. Power was reduced to 55% on December 13 to perform eddy

current testing on the main condenser tubes. The unit returned to full power on December 15. On December 17, a loss of DC control power to the main turbine overspeed protection system caused crossover steam dump to open and resulted in a load reduction to about 85% power. The unit was returned to full power within a few hours and operated there for the remainder of this period with only load following power reductions. Unit 2 completed refueling outage 17 on November 20 and returned to full power operation. Power was reduced to 55% power on November 27 to repair a leaking main condenser tube. Repairs were completed and power restored within one day. Power was again reduced to 55% on December 14 to perform eddy current testing on the main condenser tubes. The unit returned to full power on December 16. The reactor scrammed from 100% power on December 17 due to a loss of DC control power to the reactor protection system. The unit was returned to criticality that same evening and placed on 100% the following morning. Full power was reached later that night. The unit operated at full power for the remainder of this period with only load following power reductions.

Radiological Controls

Performance in the area remains constant, no strengths or weaknesses were identified.

Maintenance/Surveillance

No significant strengths or weaknesses were noted in this area. The inspector noted that in response to weaknesses observed by various groups, the licensee was conducting a training program on maintenance practices for technical management personnel.

Emergency Preparedness

Preparation for the scheduled casualty control drill were considered very good. One weakness noted was the lack of announcements to inform plant personnel of plant status during the ongoing drill.

Security

Performance in this area remains constant, no violations or deviations were identified.

Engineering and Technical Support

No significant strengths or weaknesses were noted in this area.

Safety Assessment/Quality Verification

The inspector noted that the company has the necessary review groups in place for an effective self assessment capability. Poor analysis and reporting of plant events needs continued attention. Licensee Event Reports (LER) sometimes failed to identify the root cause of an event and therefore resulted in inappropriate corrective actions.

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. Bevalacqua, Manager - Health Physics
- M. L. Mervine, Manager - Training
- *R. D. Seizert, Manager - Regulatory & Staff Services
- F. A. Flentje, Administrative Specialist

Other licensee 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. Licensee Action on Previous Inspection Findings (92701) (92702)

- a. (Closed) Unresolved Item (266/91015-01): Auxiliary Feedwater (AFW) System Check Valve Leakage.

Two out of three inline check valves on the discharge piping of the Unit 1 turbine driven AFW pump were found to be leaking by. A section of the discharge piping was hot to the touch as pressure differences between the Unit 1 and 2 steam generators drove water between the generators through the leaking check valves and the interconnected AFW piping.

Plant management analyzed this condition and determined that current surveillance performed on the check valves is adequate to establish confidence that the valve disks are intact and would seat sufficiently in the event of an upstream line break to prevent significant back flow of steam out through the break. Additional analysis was performed to alleviate a concern regarding possible water hammer effect upon starting the pump. The analysis determined that because the leaking check valves are closest to the steam generator, the fluid in the discharge piping downstream of the first check valve will be at steam generator pressure. Even though

this water may be at about 200 deg. F., the high pressure keeps it well below saturation and therefore in a liquid state. Consequently, water hammer will not occur.

As corrective action, the plant has changed the normal position of the AFW discharge motor-operated valves to shut/auto. This provides another barrier in the AFW piping to prevent cross flow between steam generators. Since this change, the discharge piping has become cool to the touch and no further evidence exists to indicate AFW back flow. The plant is also initiating a modification to replace the check valves closest to the steam generators with a new type that will seat more tightly. The inspector reviewed the plant's actions and discussed this issue with plant management. No further concerns were raised and this item is closed.

- b. (Closed) Unresolved Item (301/91019-01): Main Steam Isolation Valves (MSIVs) Failed to Shut Upon Demand.

On September 29, 1991, the Unit 2 MSIVs failed to close upon a demand signal from the control room during a routine reactor shutdown. Two operators were dispatched to the valves to investigate. The operators used a hammer to strike the operating arms of the valves, and they subsequently went shut.

The cause and sequence of events leading up to the failure of the MSIVs was determined to have occurred as the result of several violations of NRC requirements. These violations are the subject of escalated enforcement action as described in inspection report 266/301/91025. Therefore, this unresolved item is closed.

- c. (Open) Violation (301/91019-03): Improperly Erected Scaffold

On September 24, 1991, scaffolding had been erected over the 2P-15B safety injection pump in a manner which would not have restrained the planking from falling onto the pump. Additionally, the planking blocked two fire suppression sprinklers that protect this pump and its motor.

In their reply to this violation, Wisconsin Electric stated that the planking in question had been secured with cleats and therefore was not loose. Following discussion with the inspector and additional investigation, company representatives acknowledged that this was probably not the case and that a

supplemental response to this violation would be provided correcting their initial statements. Furthermore, the original Wisconsin Electric response did not discuss corrective actions committed to by the company to revise procedure PBNP 3.4.8, "Transient Combustible Control". This procedure does not delineate safe shutdown areas in its accompanying maps as implied in the procedure and has not been updated since the addition of new safe shutdown areas created with the installation of the alternate shutdown station.

Plant management has stated that the supplemental response to the violation will address these concerns. The inspector will address this issue in a future report.

3. Plant Operations (71707) (93702)

a. Control Room Observation (71707)

The inspectors observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the inspection period. During these discussions and observations, the inspectors ascertained that operators were alert, cognizant of current plant conditions, attentive to changes in those conditions and took prompt action when appropriate. The inspectors noted that a high degree of professionalism attended all facets of control room operation and that both unit control boards were generally in a 'black board' condition (no non-testing annunciators in alarm condition). Several shift turnovers were also observed and appeared to be handled in a thorough manner.

The inspectors performed walkdowns of the control boards to verify the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components.

The Plant Manager was observed making periodic tours of the control room and the plant.

b. Facility Tours (71707)

Tours of the Turbine Building, Service Water Building, Gas Turbine Building and Primary Auxiliary Building were conducted to observe plant equipment conditions, including plant housekeeping/cleanliness conditions, status of fire protection equipment, fluid leaks and excessive vibrations and to verify that maintenance

requests had been initiated for equipment in need of maintenance.

During facility tours, inspectors noticed only some signs of leakage and that all equipment appears to be in good operating condition. Plant cleanliness is improving especially in the area of physical cleanliness. Much of the miscellaneous stored equipment has been removed from the operating spaces. Storage space for this equipment remains at a premium.

c. Unit 1 Operational Status (93702)

The plant was shut down from full power on November 27 due to a tube break in the main condenser. Details appear in paragraph 3.e. Repairs were completed and the plant restarted on November 29. Full power was reached the following day.

Power was reduced to 55% on December 13 to perform eddy current testing on the main condenser tubes. Testing and additional tube plugging were completed and the unit returned to full power on December 15.

On December 17 a loss of DC control power to the main turbine overspeed protection system caused crossover steam dumps to open and resulted in a load reduction to about 85% power. DC control power was restored and the unit was returned to full power within a few hours. The unit operated at full power for the remainder of this period with only load following power reductions.

d. Unit 2 Operational Status (93702)

The unit completed refueling outage 17, reaching 99% power on November 20. Due to the steam generator tube plugging performed during the outage, full power was not reached until all four turbine governor valves were fully opened with T_{ave} at the upper end of the normal operating band.

Power was reduced to 55% power on November 27 to repair a leaking main condenser tube. Repairs were completed and power restored within one day. Power was again reduced to 55% on December 14 to perform eddy current testing on the main condenser tubes. Testing and additional tube plugging were completed and the unit returned to full power on December 16.

The reactor scrammed from 100% power on December 17 due to a loss of DC control power to the reactor protection

system. The unit was stabilized in a hot shutdown condition and repairs affected on the control power supply. Details appear in paragraph 3.f. The unit was returned to criticality that same evening and placed on line the following morning. Full power was reached later that night. The unit operated at full power for the remainder of this period with only load following power reductions.

e. Main Condenser Tube Leak (93702)

An orderly shutdown was commenced on Unit 1 November 27 due to a suspected tube leak in the main condenser. Sodium and conductivity levels in the two steam generators quickly reached levels that required a reactor shutdown in accordance with the plant's administrative procedures. The unit was taken off line at about 8:30 a.m. and a search for the leaking tube was initiated. Point Beach uses a once through type condenser with Lake Michigan as the source of circulating water.

The investigation revealed that one tube had completely severed and was displaced about one-tenth of an inch at the break point. The leak rate into the condenser was about 17 gpm. No cause was immediately identified for the break, but fatigue failure is the primary suspect. This tube is located very near the steam exhaust point from the main turbine, the area subject to vibrations. As a precaution, the licensee plugged about 50 tubes in the immediate vicinity of the faulty tube, as well as the faulty tube itself.

The plant used this shutdown as an opportunity to test the Unit 1 main steam isolation valves and also to perform monthly surveillance testing on the reactor protection system (Nuclear instrumentation channel N44 had previously been spiking, creating the potential for a reactor scram during this testing at high power).

Following repairs on the main condenser, two days were needed to restore chemistry levels in the steam generators before plant startup could commence. The primary system was cooled down to about 400 deg. F. to facilitate steam generator chemistry restoration. Unit 1 was restarted and placed back online November 30. Full power was reached the next day.

Concurrent with this event, a 1 gpm leak was identified in the Unit 2 main condenser. Because this leak rate was slow enough not to require a plant shutdown, power level was reduced to about 55% and a portion of the

condenser was isolated to identify the leak while the unit remained online. This leak was found to be in the same region as on the Unit 1 side, so the adjacent 50 tubes were plugged in this condenser as well. Full power was restored within one day.

f. Unit 2 Reactor Scram (93702)

The Unit 2 reactor scrambled from 100% power on December 17 due to a loss of DC control power to the reactor protection system.

The plant was performing a modification to install inline fuses on various DC switchgear breakers in response to a weakness identified during an NRC inspection. This required rewiring the affected breakers. When an old cable was being removed from breaker 10 in panel D11, it rubbed against one cable attached to breaker 32 and caused it to pull out of its connector socket. Breaker 32 supplies panel D22, which was consequently deenergized. Since panel D22 supplies control power to the A train reactor trip relays, the loss of power caused the relays to drop out and deenergized the undervoltage coil on the A reactor trip breaker. The A trip breaker opened and the reactor scrambled as expected.

Panel D22 also supplies train A of the independent overspeed protection system for both units' main turbines. Loss of power to this system generated a crossover steam dump actuation. The resultant dumping of crossover steam to atmosphere caused Unit 1 electrical load to decrease to about 380 MWe. The Unit 1 operator manually reduced load as the crossover steam dumps were shut to lower reactor power below the value required when these valves are out of service. Unit 1 was stabilized at about 85% power. The unit was returned to full load once power was restored to the overspeed protection system.

Another load supplied by panel D22 is the train A of safeguards DC control power. During the 30 minutes this panel was deenergized, the A train of safeguards would not have actuated on either an automatic or manual emergency safeguards feature start signal because the associated sequencers were deenergized. All the individual components, however, remained operable and could have been started individually from the control room if needed. Train B safeguards equipment was unaffected.

Operators responded to the scram and stabilized the

unit in a hot shutdown condition. The inspector responded to the control room and monitored operator actions and plant response. The pressure relief valves on feedwater heaters 5A and 5B and on the main feedwater suction piping lifted during the transient and did not properly reseal. Operators took action to lower the associated system pressures and the relief valves reseated. The affected relief valves were repaired prior to restarting the unit.

Operator response to the event was good. Emergency operating procedures were properly followed and plant management responded to the control room to monitor overall corrective actions. The inspector considered informational communications during the event to have been weak. There were very few announcements of plant status made over the plant's public address system and few if any status announcements made in the control room by the shift supervisor. The high training level of the operators was evident, as each person went about performing the actions required of them with only minimal coordinating information.

An investigation of breaker 32 in panel D11 revealed that the remaining wire attached to the breaker was loose. A maintenance technician was able to easily pull it out of its connection socket with his hand. Both leads were subsequently reattached and torqued and power was restored to panel D22. All other breakers in panel D11 and the corresponding Unit 1 panel (D13) were checked for tightness. No other excessively loose connections were found.

Breaker 32 had been recently rewired in November 1991 as part of the currently ongoing modification. The work procedure documents that its connectors were properly torqued to 50 in-lbs and verified by a quality control check. The inspector reviewed the documentation and interviewed the maintenance supervisor who performed the torquing verification. That individual stated that he specifically remembers observing the technician torque the connectors to the required value stated in the procedure. Plant management believes that the seven stranded cable may have "relaxed" after torquing, with the individual strands slowly shifting position while under compression. The plant is conducting an experiment to evaluate this hypothesis. In the meantime, the modification procedure has been changed to require retorquing of all wire terminations after the initial torque has been allowed to set.

Unit 2 was taken critical that same evening and placed on line the following morning. Full power was reached later that night.

g. Safety Related Equipment Inoperability (71707)

In accordance with a commitment to the NRC, Point Beach reported the following failures or unavailabilities of safety related equipment which have no governing Limiting Conditions for Operation (LCO) in Technical Specifications:

- On December 14 the Unit 2 B steam generator atmospheric steam dump valve (2CV-2015) failed to open within the required time during inservice testing and was declared inoperable. This valve's primary safety function is as a steam line boundary. The valve was subsequently reshut, which is its fail safe position.
- On December 15 the Unit 2 rad waste process system steam supply trip valve (2RS-SA-10) exceeded its required shutting time during inservice testing and was declared inoperable. This valve receives a trip signal upon safety injection actuation to isolate the rad waste steam supply header, so that auxiliary steam will be dedicated to the turbine driven auxiliary feedwater pump. The rad waste steam supply control valve, which remained operable, is an inline backup to this trip valve. Valve SA-10 was left shut and rad waste steam was supplied from Unit 1.
- On December 15 the West service water header isolation valve SW-2869 was taken out of service for maintenance. This valve supplies the West service water header from the North header. A parallel valve supplies the West service water header from the South header. The valve has since been returned to service.

Technical Specification 15.3.3.D addresses the service water system and states that "a valve or other passive component may be out of service provided repairs can be completed within 48 hours". The inspector questioned plant management regarding this LCO and was informed that there was uncertainty as to whether this specification applies to the valve in question.

This valve is required to be open under accident conditions to supply service water to the West header. During this particular maintenance, it was tagged in its required open position and therefore remained in service. However, discussions with plant management indicate that had the valve been tagged in its closed

positions, they still may have taken the position that the LCO did not apply, because the West header was being supplied by the redundant valve. It appears that the plant's definition of these valves being out of service was narrowly limited to gross catastrophic failures. The inspector believes the plant may not have correctly applied this and similar such specifications in the past as required. This issue remains unresolved pending an evaluation by plant management and subsequent review by the NRC (266/91024-01).

- On December 18 the P70A fuel oil transfer pump was taken out of service for corrective maintenance. This pump has a history of difficulties in developing adequate pressure differential to pass inservice testing. The pump was disassembled to determine and correct the cause of these problems. As compensatory action, the plant implemented an administrative requirement whereby the associated emergency diesel generator (G01) would be declared out of service if the fuel oil transfer pump were not restored within 4 hours. The 4 hours elapsed at 11:40 a.m. December 18 and the 7 day LCO for G01 was entered. The inspector monitored the plant's activities in this area.

The plant has a gravity fuel oil fill capability that bypasses the transfer pumps. This capability, however, requires the static pressure of the above ground fuel storage tanks to provide the flow motive. These tanks are neither safety related nor seismically qualified.

- On December 19 while performing test IT-14 to return fuel oil transfer pump P70A back to service following maintenance, the other fuel oil transfer pump (P70B) was found to have failed. The plant was already in a 7 day LCO on the G01 diesel because of the P70A pump being out of service. The administrative procedure would require that the second diesel be declared inoperable in 4 hours if the P70B pump were not restored to service. Operation with both diesels out of service is not permitted by technical specifications.

The plant entered their abnormal operating procedures and ordered a 4000 gal fuel oil tanker truck brought onsite to be connected directly to the second diesel's day tank. Simultaneously, testing and adjustments continued on the P70A fuel oil pump to return it to service before expiration of the 4 hour limit for declaring the second diesel out of service. Both tasks were completed within 10 minutes of each other with the

P70A pump being returned to service 6 minutes before the time limit expired. The plant then exited from the LCO on the G01 diesel. The P70B pump was repaired and tested the following morning and the fuel oil tanker was disconnected and released from the site.

The licensee had previously demonstrated the capability to connect truck tankers to the diesel day tanks in the event of an emergency and had incorporated this contingency action in their abnormal operating procedure. The inspector observed these evolutions.

- On December 19 the 1P15A safety injection pump discharge flow transmitter (1FT-925) was taken out of service for replacement. This evolution required about 2 hours. This flow transmitter provides indication in the control room of safety injection flow.

These reviews and observations were conducted to verify that facility operations were conducted safely and in conformance with requirements established under technical specifications, federal regulations, and administrative procedures.

4. Radiological Controls (71707)

The inspectors routinely observed the licensee's radiological controls and practices during normal plant tours and the inspection of work activities. Inspection in this area includes direct observation of the use of Radiation Work Permits (RWPs); normal work practices inside contaminated barriers; maintenance of radiological barriers and signs; and health physics (HP) activities regarding monitoring, sampling, and surveying. The inspectors also observed portions of the radioactive waste system controls associated with radwaste processing.

From a radiological standpoint the plant is in good condition allowing access to most sections of the facility. During tours of the facility, the inspectors noted that barriers and signs also were in good condition. When minor discrepancies were identified, the HP staff quickly responded to correct any problems.

All activities were conducted in a satisfactory manner during this inspection period.

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

a. Maintenance (62703)

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.

Selected portions of the following maintenance activities were observed and reviewed:

- P38B auxiliary feedwater recirculation flow transmitter bracket replacement.

The inspector noted that the flow transmitters are not labeled. Plant management stated that labels were on order and would be installed soon.

- 1F29 auxiliary feedwater pump oil replacement and greasing.
- IWP 90-221-3 (Revision 0), Fusing of safety related switchgear control power supply breakers.

While observing these activities, the inspector noted that plant management was conducting a training program they call "conduct of maintenance". All technical management personnel completed a one week course on maintenance practices which included indepth observations of maintenance work in progress. First line maintenance supervisors received an abbreviated one day version of this training. This program is in response to certain maintenance weaknesses noted by various inspection groups.

b. Surveillance (61726)

The inspectors observed surveillance testing 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.

Selected portions of the following test activity were observed and reviewed:

- ICP 3.6 (Revision 6) Instrumentation & Control
Functional Test for Post
Refueling Startup

No discrepancies were noted during the observance of the above test.

6. Emergency Preparedness (71707)

An inspection of emergency preparedness activities was performed to assess the licensee's implementation of the site emergency plan and implementing procedures. The inspection included monthly review and tour of emergency facilities and equipment, discussions with licensee staff, and a review of selected procedures.

Casualty Control Drill (71707)

The plant conducted an emergency preparedness casualty control drill on December 11 utilizing their new simulator for the first time in a full scale exercise of this type. As an additional benefit, simulator data was fed directly to safety parameter display system monitors in the Technical Support Center (TSC) through a special link designed for this purpose. This provided the TSC with real time data on 'plant' parameters. Unlike most emergency preparedness drills, which require the introduction of artificialities to prevent operators from mitigating the consequences of the simulated accident, this drill allowed correct operator actions to recover the plant.

The preparations for this drill were considered very good. Simulator control room log entries, chemistry graphs, shift turnover sheets, equipment tag logs, maintenance work

requests, and other documents were prepared in advance on the same forms actually used in the plant, with entries current as of the start time of the drill. The same equipment that was currently out of service in the plant was also listed as out of service in the simulator.

The inspector considered the drill to have gone well. Operators responded to the scenario events and entered the emergency procedures as appropriate. The 'plant' was recovered before any core damage would have occurred, therefore the drill did not proceed past the onsite stage. One weakness noted was the scarcity of announcements over the public address system informing plant personnel of plant status. As a result personnel outside the control room knew very little about the progression of the casualty and the actions being taken to combat it.

All activities were conducted in a satisfactory manner during this inspection period.

7. Security (71707)

The inspectors, by direct observation and interview, verified that portions of the physical security program were being implemented in accordance with the station security plan. This included checks that identification badges were properly displayed, vital areas were locked and alarmed, and personnel and packages entering the protected area were appropriately searched. The inspectors also monitored any compensatory measures that may have been enacted by the licensee.

All activities were conducted in a satisfactory manner during this inspection period.

8. Engineering and Technical Support (71707)

The inspectors evaluated licensee 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.

All activities were conducted in a satisfactory manner during this inspection period.

9. Safety Assessment/Quality Verification (40500) (90712) (92700)

The licensee'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 (90712)

The inspector 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:

*266/91-012-01 (Closed) Nuclear Instrumentation
Turbine Runback Caused by a
Voltage Spike on Power Range
Channel N44

This report describes the November 3 Unit 1 main turbine runback to 80% power caused by power range nuclear instrumentation channel N44. Numerous similar voltage spikes have occurred on this channel since July 1991, with several of these spikes causing turbine runbacks. A detailed history is contained in inspection report 266/301/91022.

Various component replacements were made in this instrument in an attempt to correct the cause of these voltage spikes, including detector replacement on October 26, 1991. The November 3 spike revealed that the cause had not yet been corrected. Since this latest spike had also been observed in the 25 VDC power supply in this instrument channel, it was replaced November 7. This power supply was then artificially loaded on a test stand and monitored. On December 5, the power supply spiked low, consistent with its behavior observed during the recent nuclear instrumentation spikes. This has led the plant to conclude that this power supply was the cause of the channel N44 nuclear instrumentation spikes. This channel was subsequently restored to normal operation. No spikes have occurred in this instrument since replacement of its 25 VDC power supply.

266/91-012-01 (Closed) Nuclear Instrumentation
Turbine Runback

This supplemental report describes the September 24, 1991, main turbine runback to 80% power caused by an inverter bus voltage transient initiated during inverter maintenance. The plant's evaluation confirms that this event was caused by a combination of personnel error and an inadequate procedure. The plant was cited for this procedure violation (266/91019-02) and the inspector will monitor corrective action via the violation tracking system.

*301/91-005 (Open) Both Safety Injection Pump
Breakers Racked In with
RCS Temperature Less
Than 275 Degrees

This report describes a technical specification violation discovered November 11 where both Unit 2 safety injection pump breakers were racked in simultaneously while reactor coolant temperature was below 275 deg. F. Such a condition creates the potential to overpressurize the reactor coolant system because the overpressure protection system cannot relieve the coolant inventory supplied by two SI pumps simultaneously. This condition had existed for about 2 days prior to its discovery. Details are contained in inspection report 266/301/91022.

The cause of this event, as stated in the report, is equally attributed to procedural inadequacy and operator error. The inspector's review determined that although the operator could have prevented this event by noticing that the other SI pump breaker was racked in, he was following an approved procedure and correctly performed the steps directed therein. The red tag that the operator cleared from that breaker had been in place for an unrelated maintenance action that was completed. The tag that had been put in place per the shutdown procedure (OP-3C) to assure compliance with the Technical Specifications, was removed during performance of a refueling test (ORT-3) and never reinstated. The NRC believes that procedural inadequacy is the principle cause of this event.

The plant has initiated corrective action in the form of procedure revisions and operator aids to prevent recurrence of this event. This LER remains open pending further progress these actions.

*301/91-015 (Open) " A" Steam Generator Main Steam
Isolation Bypass Valve Left
Open

This report describes a condition where the "A" steam generator main steam isolation bypass valve was found open during performance of a plant shutdown procedure. The valve had remained open about 12 hours. The main safety function of this manual valve is as a steam isolation boundary. It was shut upon discovery of its open position. An investigation of this event determined that the valve had not been shut following completion of main steam isolation valve testing (IT-280). An inadequate procedure was determined to have caused this occurrence and appropriate corrective actions have been initiated.

The safety assessment in the event report provides an evaluation of the consequences of the two accidents which require isolation of a steam generator: steam line rupture and steam generator tube break. The analysis for the tube break is taken to completion, however, the analysis for the steam line rupture concludes with the statement: that more heat would be removed from the primary system than is assumed in the FSAR analysis. No determination is made as to consequences, if any, of this additional heat removal (recriticality, etc.). The inspector discussed this report with plant management and was informed that a supplement providing this additional analysis would be provided. This LER remains open pending NRC evaluation of the additional analysis.

b. LER Follow Up (92700)

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. Off Site Review Committee Meeting (40500)

The inspector observed meeting 46 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 NRC Region III. Much of the meeting was

held onsite at Point Beach and included tours by individual members of various parts of the plant.

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

d. Self Assessment Capability (40500)

The inspector evaluated the effectiveness of Wisconsin Electric's self assessment capability. The evaluation, which was performed on an ongoing basis, focussed on determining whether the self assessment programs contribute to the prevention of problems by monitoring and evaluating plant performance, providing assessments and findings, and communicating and following up on corrective action recommendations.

The company has the necessary review groups in place for effective self assessment. The review groups operate independently and with a critical approach to the review process. There appears to be serious management commitment to safety review, and safety review personnel appear to have the requisite abilities, experience, and authority to do quality technical work.

A weakness in the company's program has been occasional poor analysis and reporting of plant events. Licensee Event Reports sometimes failed to identify the root cause of an event, and therefore inappropriate corrective action was proposed. This issue has been covered in recent inspection reports and has been discussed in meetings between the company and the NRC. The inspector will continue to address this in future reports.

All activities were conducted in a satisfactory manner during this inspection period.

10. Outstanding Items (92701)

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. An unresolved item disclosed during the inspection is discussed in paragraph 3.g.

11. Management Meetings (30702)

A meeting was held between NRC management and Wisconsin Electric management on December 13, to discuss items of interest and foster improved communications between the company and the NRC. Items of discussion included the recent failure of the main steam isolation valves to shut upon demand and the resultant enforcement action, allocation of new assets within the nuclear power department, and communications between the company and the NRC and within the nuclear power department.

12. Plant Management Change (71707)

The manager of training left the company December 20. His position remains open pending assignment of a replacement.

13. Exit Interview (71707)

A verbal summary of preliminary findings was provided to the licensee representatives denoted in Section 1 on January 3, at the conclusion of the inspection. No written draft inspection material was provided to the licensee during the inspection.

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