

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-266/92007(DRP); 50-301/92007(DRP)

Docket Nos. 50-266; 50-301

Licenses No. DPR-24; DPR-27

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

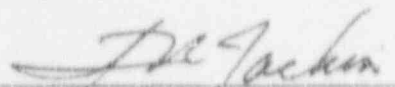
Facility Name: Point Beach Units 1 and 2

Inspection At: Two Rivers, Wisconsin

Dates: February 1 through March 16, 1992

Inspectors: K. R. Jury
J. Gadzala
K. G. O'Brien
K. Shembarger

Approved By:


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

3-30-92
Date

Inspection Summary

Inspection from February 1, through March 16, 1992. (Reports No. 50-266/92007 (DRP); No. 50-301/92007(DRP))

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

Results: No violations of NRC requirements were identified. One unresolved item and two items for additional followup were noted. An Executive Summary follows.

Plant Operations

The Unit 2 turbine was manually run back to 79% power on February 4 due to decreasing hydrogen pressure in the main generator. The pressure drop occurred when an operator attempted to add hydrogen gas to the main generator with the hydrogen system in an abnormal lineup for maintenance. His actions were stopped and the system was restored to normal.

Plant cleanliness continued to improve. A new procedure was instituted to provide a means for identifying housekeeping deficiencies to management.

Plant management contracted for a Electric Power Research Institute (EPRI) brief on outage risk assessment in preparation for the upcoming Unit 1 refueling outage. The briefing included listings and evaluations of risk factors recommendations and for corrective or compensatory actions.

A fault in a lighting transformer and concurrent degradation of its supply breaker caused the upstream breaker supplying the entire safeguards motor control center to open. This breaker tripped and was closed three times before the faulty transformer was identified. The transformer and its supply breaker were both replaced. The issues regarding closing of circuit breakers after their opening on fault and the cause of the lighting transformer's circuit breaker failure remain open.

An operator requalification program audit was performed the week of February 17. The examiner observed simulator operating exams and job performance measures administered to an operations crew and a staff crew. Although a few weaknesses were observed, the annual evaluation program for licensed operators was effective.

In accordance with a commitment to the NRC, Point Beach reported 19 failures or unavailabilities of safety related equipment which have no governing LCOs in technical specifications.

Radiological Control

Performance in this area remained good. No significant issues were noted.

Maintenance/Surveillance

A valve operator motor that tripped on thermal overload was inspected for appropriate repairs. A galled stem was believed the cause in this event. Similar valves were inspected as a precaution but no other problems were found.

Both diesel generators experienced a start failure about a week apart due to a starter motor pinion abutting against the diesel bull gear. The subsequent start attempt on each diesel was successful. The plant is evaluating a modification to improve the reliability of the air start motors.

Incorrect calibration current data was inadvertently entered into a nuclear instrument calibration procedure. This issue remains unresolved pending an analysis of the safety significance of the incorrect calibration currents and the affect on reactor protection system operation.

Emergency Preparedness

An emergency plan drill was held February 12 - 13. Weaknesses were noted in the control of drill activities. A new paging system was implemented using more compact pagers with a longer range. The joint public information center

was moved to a location outside the emergency planning zone.

Security

Work completed on a door renovation project has cut the security maintenance backlog by about 50%.

Engineering and Technical Support

Leaks were found in the service water piping wall immediately downstream of the component cooling water heat exchangers. This header normally operates at a vacuum, which caused cavitation corrosion in the discharge piping. As an interim measure, the affected sections were replaced with piping of a similar material until a material more resistant to cavitation corrosion is chosen.

Safety Assessment/Quality Verification

Five Licensee Event Reports were reviewed and closed.

Meeting 47 of the Off Site Review Committee was observed. The committee conducted thorough reviews. The effectiveness of this committee was considered good.

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
- *F. A. Flenje, Administrative Specialist

Other company 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 (92701) (92702)

a. (Closed) 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 could have allowed the planking to fall onto the pump. Additionally, the planking blocked two fire suppression sprinklers that protect this pump and its motor. The planking was promptly removed by shift personnel after its identification by the inspector.

In their initial response to the citation for this violation, Wisconsin Electric did not adequately address all the concerns associated with this issue. Following discussions with the inspector, a supplemental response was issued correcting statements in the initial reply and addressing the identification of safe shut down areas in their transient combustible control procedure. The plant has since completed revisions to this procedure to clearly identify those areas designated as safe shutdown areas. This item is closed.

b. (Closed) Unresolved Item (266/91013-02): Inadequate Retention of Plant Records.

During review of a plant event, inspectors noted that various strip charts of plant operating parameters had not been retained for a minimum of five years as required by technical specifications. Some were being kept for only three months and then discarded.

The plant determined that their internal controls had been inadequate to assure retention of records as required. To prevent reoccurrence, procedure PBNP 4.16, "Logbooks and Records", was revised to specify retention of records in accordance with technical specification requirements. In addition, the quality assurance group will commence periodic audits of the control of operating records following completion of a new inventory of these records. The inspector reviewed the changes to the procedure and had no further concerns. This item is closed.

c. (Closed) Unresolved Item (266/91015-02): Inadequate Guidance for Auxiliary Feedwater Turbine Bearing High Temperatures.

While observing a maintenance action, the inspector noted that the operating procedure for auxiliary feedwater, OI-62B, listed no precautions or actions to be taken if the high bearing temperature alarm actuates. Additionally, the monthly inservice test procedure, IT-08, contained no specification for turbine bearing temperature although it is monitored and recorded.

As corrective action, the plant revised procedure OI-62B to provide precautions and actions to be taken upon a high bearing temperature alarm. Some of the actions include checks of cooling and lubrication along with a requirement to secure the pump if bearing temperatures exceed 200° F. For temperature alarms occurring during inservice testing, the alarm response cards refer to OI-62B for appropriate action. The inspector reviewed the revised procedures and had no further concerns. This item is closed.

No violation or deviations were identified.

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 most 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.

b. Facility Tours (71707)

Tours of the turbine building, circulating water pumphouse 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 few signs of leakage and that all equipment appears to be in good operating condition. Plant cleanliness and equipment stowage continues to improve. Oil leaks are attended to with absorbent material and any accumulations are wiped up. Much of the material previously adrift in the plant has been gathered and placed in designated areas. In addition to a recently issued procedure regarding housekeeping (PBNP 3.4.12), the plant issued procedure PBNP 3.4.20, "Plant Inspection Program". The purpose of this latest procedure is to provide a means to ensure industrial safety, radiological, material, cleanliness, and housekeeping deficiencies are identified to management and then corrected.

c. Unit 1 Operational Status (93702)

The unit continued to operate at full power during this period with only requested load following power reductions.

In preparation for the upcoming refueling outage, plant management contracted with the Electric Power Research Institute (EPRI) to provide a presentation on outage risk assessment management. Representatives from EPRI and Westinghouse provided information from draft NUREG-1449, "Shutdown and Low Power Operation at Commercial Nuclear Power Plants in the United States", as well as a simplified generic shutdown risk assessment performed by Westinghouse. Details presented included listings and evaluations of significant factors contributing to shutdown risk, including probabilities of core damage associated with various activities and equipment configurations. This was followed by recommendations of corrective or compensatory actions to minimize the associated risk.

The inspector observed the presentation and noted that senior plant managers, managers from the company's corporate office, and planners involved in outage scheduling and coordination all participated.

d. Unit 2 Operational Status (93702)

The unit continued to operate at full power during this period with the exception of a manual runback on February 4 due to a loss of hydrogen pressure in the main generator.

e. Manual Turbine Runback (93702)

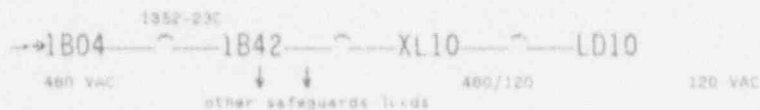
On February 4, 1992, the Unit 2 turbine was manually run back from 100% to 79% power in response to a rapid loss of main generator hydrogen cooling pressure. The hydrogen pressure decrease resulted from an improper valve lineup.

Maintenance had been completed on a portion of the hydrogen dryer earlier that morning and the system valve lineup remained in an abnormal configuration. Due to the turbine generator low pressure alarm being actuated, an operator was dispatched to manually add hydrogen to the generator. The operator reviewed the maintenance valve lineup and used a portion of OI-32, "Main Generator and Hydrogen Gas Dryer Purging", to add hydrogen. Because of the system configuration existing for maintenance, a vent valve for the hydrogen piping header was open. When the operator opened the hydrogen supply valve, hydrogen from both the supply tanks and the main generator began venting.

The reactor operator noticed the generator pressure dropping and reduced turbine load in accordance with administrative requirements. The gas addition procedure was halted, the valve lineup restored, and hydrogen subsequently added to the main generator without further incident. Procedure OI-32 is being revised to provide stricter controls over valve configuration to prevent reoccurrence of this event. The inspector responded to the control room and monitored operator response to this event. No additional concerns were noted.

f. Safeguards Bus Fault (71707)

Supply breaker 1B52-23C tripped three times at about 3 minute intervals on March 12 due to a fault on a downstream lighting transformer. This breaker supplies motor control center panel 1B42, which was de-energized each time the breaker tripped. The breaker was shut after the first trip when no fault could be found in 1B42. After the breaker tripped the second time, the supply breaker for the auxiliary building filter fan (W30A) was opened due to the smell of burnt insulation in the area of the fan. This fan was realized not to be the cause of the electrical fault when the 1B42 supply breaker tripped a third time. Additional investigation revealed that lighting transformer XL10 had overheated and destroyed itself. This transformer supplies lighting panel LD10 as shown in the figure below. Lighting loads supplied by LD10 include some lights in the control room. The plant had installed temporary additional lighting to compensate for lighting supplied by LD10.



The safety systems affected by 1B42 include auxiliary feedwater, service water, containment fan cooling, and containment sump. Only one train in each system was affected for the few minutes that 1B42 was de-energized.

The plant investigated the cause for the XL10 supply breaker not tripping selectively as expected to de-energize this transformer and found that the trip mechanism on the breaker was apparently not working properly. This HFA-3100 breaker, rated at 100 amps, did not trip on thermal overload under an approximately 300 amp test current supplied for 70 seconds. The trip criteria is 20 to 45 seconds. Of note is that the breaker tripped on the test stand 40 seconds after the test was terminated. Smoke was also observed emanating from the thermal overload coil. Additional evaluation of the breaker is planned. A new breaker and new transformer were installed March 14 and the system was restored to service.

An issue identified by the NRC during a recent Electrical Distribution System Functional Inspection regarded testing of molded case circuit breakers. In response to this concern, the plant had undertaken an effort to develop a circuit breaker testing program. The program details have since been prepared and are awaiting review and approval by the manager's supervisory staff. This testing program is expected to identify any other faulty breakers that may be installed in the plant.

The plant has procedural guidance regarding replacement of blown fuses that allows a blown fuse to be replaced once. If the fuse blows a second time, the equipment is to be removed from service and the fault determined. No such guidance is provided for circuit breakers although plant management is evaluating the need to provide such guidance. This issue remains open pending completion of breaker testing and the plant's decision regarding the extent of additional guidance on the control of breakers (266/92007-01).

g. Regualification Program Audit (71707)

During the week of February 17, a NRC Region III operator licensing examiner performed an announced audit of the Point Beach Regualification Program. Although NUREG 1021, the operator licensing "Examiner Standards", was used as a guideline for the audit, nothing within this audit construed requirements beyond those commitments in the plant's regualification program.

The examiner observed simulator operating exams administered to an operations crew and a staff crew, and observed the administration of Job Performance Measures (JPMs) to both crews on the simulator. The following observations were discussed with plant management on February 20:

- 1) Events described in the exam did not always occur as planned

due to occasional lapses in the control of dynamic simulator exam administration. For example, during a reactor coolant pump (RCP) seal failure event, the simulator operator incorrectly inserted indications of a seal failure on both the RCPs. Later, when operators failed to isolate the seal leakoffs within 5 minutes, the simulator operator failed to increase seal leakage to 400 gpm as planned for this scenario. In addition, there was interaction between the evaluators, operators and the booth controllers during the exam which led to prompting that would not always be available during normal plant operation. Both a simulator operator and evaluator were observed providing guidance to an operator on the use of a portion of the radiation monitoring system.

2) Minor delays or inaccuracies occurred during the exam due to indecisive control of JPM administration on the simulator. For example, when the initial conditions specified in a JPM regarding charging pumps were found to be inaccurate, the JPM evaluator changed the JPM task on the spot to have the operator place the mispositioned charging pump in the correct mode. When an operator assigned to perform a task was having difficulty locating a procedure, the second operator involved in the 2 on 1 exam walked slowly over to the shelf where the procedure was located. He then looked down at the procedure book until the operator who was to perform the task recognized this and retrieved the procedure book.

3) Overall evaluation of the operators by the training staff was effective. The staff adequately identified a significant communications weakness that existed with one crew. One area in need of additional attention by the evaluators pertains to the manipulation of controls by the DOS and DSS (both licensed SROs). On several occasions the DOS or DSS failed to remain in a position of oversight, and performed control board manipulations instead of directing the reactor operators to perform the manipulations. Although no adverse consequences resulted during the course of the exam, failure of the SROs to remain in a position of oversight could result in misdiagnosis or nonrecognition of an event.

4) The dynamic simulator scenarios were consistent with the recommendations established in NUREG 1021. Integration of component failures into the major transients was good. The observed dynamic scenarios were an improvement over those submitted for previous requalification cycles. There was, however, a lack of electrical malfunctions, which limited the spectrum of abnormal and emergency operating procedures that could be addressed.

5) The complete walk through exams were reviewed. Each was comprised of four in-plant JPMs and six simulator JPMs. The JPM critical steps were properly identified in both the in-plant and simulator JPMs. The average walk through exam contact time was considerably shorter than the recommended contact time of three hours. Several of the JPM questions required only a basic system

knowledge to correctly answer the question. A few JPMs and questions lacked an estimated time for completion. The need for references to answer the questions was not identified.

Although a few weaknesses were observed, the annual evaluation program for licensed operators was effective.

h. 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 February 3, insulation removal commenced around various portions of the service water system in preparation for piping support refurbishment.
- On February 3, the Unit 1 B train low head safety injection flow transmitter (1FT-928) was removed from service for planned maintenance. This flow transmitter provides indication in the control room of safety injection flow.
- On February 4, the Unit 2 B train low head safety injection flow transmitter (2FT-928) was removed from service for planned maintenance.
- On February 4, the yellow instrument bus swing inverter (DY00) was removed from service for two days for annual maintenance and inspection.
- On February 7, 302 emergency diesel starting air compressor (K5B) was removed from service to repair an air leak. There is a redundant air compressor for each emergency diesel as well as a ready supply of compressed air in the starting motor air banks. The plant considered the emergency diesel operable during this activity.
- On February 15, the P70B fuel oil transfer pump failed a quarterly in-service test (IT-14) due to low differential pressure and was declared inoperable. A subsequent flow test demonstrated that the pump would deliver the required fuel flow to the emergency diesel day tanks and the pump was declared operable. The plant is evaluating their in-service testing methodology vis-a-vis these positive displacement pumps to determine the cause for their repetitive failure of the differential pressure portion of testing.
- On February 18, the Unit 1 hot leg sample line radioactivity monitor (IRE-109) was removed from service to repair a small leak on a coolant sampling receptacle.

- On February 18, the gas turbine generator (G05) was removed from service for rotor balancing.
- On February 18, the Unit 1 white instrument bus inverter (1DY03) was removed from service for routine maintenance.
- On February 20, the Unit 1 backup pressurizer heater bank "A", (1T-001A) was removed from service for routine breaker maintenance.
- On February 22, G01 emergency diesel service water δP instrument (DPIS-2843) was removed from service for calibration.
- On February 24, Unit 1 component cooling water (CCW) flow instruments 1FI-640, 1FI-649, 1FI-650; and flow bistables 1FS-640, 1FS-649, 1FS-650 were removed from service for maintenance. These devices provide local flow indication and remote low flow alarms for CCW flow to residual heat removal pumps, containment spray pumps, and safety injection pumps.
- On February 25, the red plant process computer multiplexer (C176) was removed from service for inspection. There are four channels of computer multiplexers in the system.
- On February 26, the P708 fuel oil transfer pump was removed from service for periodic maintenance (refer to February 15 entry).
- On March 3, the service water isolation valve (SW-29308) to spent fuel pool heat exchanger HX-13B was removed from service for maintenance.
- On March 3, the Unit 1 yellow instrument bus inverter (1DY04) was removed from service for a routine inspection.
- On March 9, the Unit 2 white instrument bus inverter (2DY03) was removed from service for a routine inspection.
- On March 11, primary auxiliary building battery and inverter room ventilation fan W-085 was removed from service for maintenance.
- Several times during this period, individual safety injection accumulator level transmitters were removed from service for corrective maintenance. There are two level channels provided for each accumulator. These events were not required to be reported under this commitment because the accumulator level transmitters and indicators are not considered safety related, nor are they quality assurance items, even though they are the primary means of verifying accumulator water inventory complies with technical specification requirements.

The company had recently committed to upgrade technical

specifications with appropriate LOCs and surveillances for all equipment required by the plant's accident analysis. Safety injection accumulators were identified by company engineers as lacking surveillance requirements in technical specifications. The corresponding recommendation was to incorporate the identical surveillance requirements of standard technical specifications (NUREG 0452, rev. 4). Section 4.5.1.2 of standard technical specifications requires each accumulator water level and pressure channel to be demonstrated operable periodically. The inspector will continue to follow this condition. The plant's technical specification upgrade project remains an open issue pending additional progress (266/92007-02).

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.

No violations or deviations were identified.

4. Radiological Controls (71707)

The inspectors routinely observed the plant'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 physicist (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.

No violations or deviations were identified.

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:

- Repair of 2SI-851A (residual heat removal pump suction)

This maintenance was performed to ascertain and repair the cause of this valve's motor tripping on thermal overload. A review of machinery history revealed that a similar event occurred in 1987. The cause of that event was thought to have been excessive grease seeping into the valve operator spring packing and hydraulically binding the compression washers. This would prevent the limit switch from reaching its setpoint and shutting off the motor upon the valve reaching the limit of its travel. The grease was removed and new end caps were installed that enable excess grease to escape and thereby avoid hydraulic binding.

Since the binding problem resurfaced despite the new end caps, plant engineers performed additional investigation following this most recent failure. The valve operator spring packing was disassembled and completely cleaned of grease. This revealed galling on the center connecting shaft. This galling is suspected of having been the cause of the compression washer binding problems. The shaft was reworked to remove the galling and the valve returned to service. Plant engineers initiated action to examine the spring packing of other valves of this same type.

- Repair of 1LI-938 accumulator level instrument

The technician performing this work appeared knowledgeable of the level instrument circuitry. A new type of test module was being used to examine the faulty instrument and a newly written detailed procedure governing use of the test module was also being field evaluated. The technician's supervisor closely monitored this activity. After several attempts at using the test module failed, the module's vendor was contacted for additional guidance. The vendor informed the plant that the test module was being used improperly. With a newly gained understanding of the test module, the procedure was rewritten and the level instrumentation

examination was successfully completed.

The inspector noted assorted parts (nuts, washers, back panels) laying loose inside the main control board panels. This was brought to the attention of shift management for correction.

- 2P29 auxiliary feedwater suction piping support replacement

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 activities were observed and reviewed:

- RMP 110 (Revision 2), G01 (G02) Redundant Systems Check

Emergency diesel G01 experienced a start failure on January 30 following maintenance and diesel G02 experienced the same event during a routine surveillance test on February 7. Both are believed to have been due to an air start motor pinion abutting against the diesel bull gear during the starting process. This prevented the starting motor pinion from engaging the bull gear and subsequently rolling the diesel. Such an event last happened in 1989. Plant technicians performed an inspection of all electrical and mechanical components associated with the diesel starting system following both start failures. No abnormalities were identified. The start test was then repeated without further incident.

Each diesel has two starter banks with two air start motors in each bank. The two motors in each bank are connected to their air supply in series such that the first motor must engage the bull gear before the second motor can be supplied with air. During an automatic start, a sequencer directs air to the starter banks in the following order: First bank, second bank, both banks. If the diesel does not start on the first bank, the air supply is shifted to the other bank. If the diesel still does not start, the sequencer resets and then directs air to both banks simultaneously. Under accident conditions, both diesels would likely have been started by the second starter bank, despite a pinion abutment on the first bank, due to the sequencer's

automatic shifting to the second starter bank.

Plant engineers discovered a probable cause for the pinion abutment problem following the 1989 event. A corrective modification was studied but never implemented due to difficulties in obtaining vendor support with the engineering analysis. The reoccurrence of this event prompted the plant to revisit this modification to the air start motors. The vendor has since changed ownership and has expressed a positive response towards assisting in engineering analysis of the modification. The inspector discussed this event with plant management, examined the air starter system, reviewed details of the proposed modification, and had no further concerns.

- IT-45 (Revision 21), Safety Injection Valves (Quarterly)
- ICP 2.8 (Revision 16), Nuclear Instrument Power Range Axial Offset Calibration Procedure

This procedure sets the calibration current for the power range nuclear instrument input to the axial offset circuitry. After entering the settings on the first of the four Unit 2 instruments, the technician placed the second instrument out of service for adjustment. At this point, the technician's misgivings about the detector current values specified in the procedure caused him to stop work and question the values before adjusting the second instrument. A subsequent review of the data factors revealed they were indeed erroneous.

The calibration current values used by this procedure are derived from the same surveillance that provides the values for procedure ROD 14. However, while the data entered in procedure ROD 14 is specified as the calibration currents for 100% reactor power, the data in procedure ICP 2.8 requires the calibration currents for 105% power. In this instance, the calibration currents for 100% power were inadvertently entered into procedure ICP 2.8.

As a result of this error, the $\delta\Phi$ inputs to the δT protection circuit were considered out of service from two power range detectors simultaneously. Such a condition is contrary to the requirements of technical specification table 15.3.5-2, which requires that at least three of the four detectors be operable. Company engineers are performing an evaluation to determine the safety significance of the wrong calibration currents on the reactor protection setpoints. This issue remains unresolved pending completion of the evaluation and a subsequent review by the inspector (301/92007-03).

The correct calibration currents were subsequently entered in the procedure and the surveillance completed without further incident.

- RESP 6.1 (Revision 11), Core Power Distribution and Nuclear Power Range Detector Calibration

No other discrepancies were noted during the observance of any of the above tests.

6. Emergency Preparedness (71707)

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

The plant implemented use of a new paging system February 7, with a significantly longer range, enhanced capabilities for emergency use such as group paging and predefined messages, and greatly improved reliability. Pager testing was commenced shortly thereafter with good results.

The Wisconsin Electric joint public information center (JPIC) was moved February 11 from the city of Two Rivers to the city of Manitowoc so that it would be located outside the ten mile emergency planning zone. The JPIC is now located in a local hotel about 17 miles south west of the plant.

An emergency plan drill was conducted February 12 - 13 in preparation for the annual emergency exercise. Although the overall drill went well, weaknesses were noted in the control of the drill due to either an inadequate number of drill controllers or insufficient briefing of the controllers. Communication of information to players was also weak.

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 plant.

A door renovation project is underway to address past deficiencies regarding doors that would not latch properly when closed. This has currently reduced the security maintenance backlog by about 50%.

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

No violations or deviations were identified.

8. Engineering and Technical Support (71707)

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. Erosion of Service Water Piping (71707)

Leaks developed in the pipe wall immediately downstream of the service water throttle control valves on the discharge side of two of the four component cooling water (CCW) heat exchangers. The service water exiting the four CCW heat exchangers enters a common discharge pipe which then descends about 60 feet to lake level. Due to the large elevation drop, the service water pressure in the discharge header from the CCW heat exchangers is at a vacuum of about 20" Hg. The large pressure drop across the discharge throttle control valve coupled with the operating vacuum in the discharge header is believed by the plant to cause cavitation, which erodes the pipe wall material. Of note is that the leaks that developed were readily evident during system operation due to the vacuum in the header. Air was leaking into the piping vice water leaking out.

The inspector observed the interior section of the damaged piping that was cut away and noted severe wastage of pipe wall material. An operability evaluation performed by the plant determined that the heat exchangers remained operable for their accident function. The justification was based on the fact that the damage existed only on the wall of the bypass piping around the main service water discharge piping isolation valve (the throttle valve is located on this small diameter bypass pipe). The damaged section was isolated, leaving the main service water discharge piping from the CCW heat exchanger capable of fulfilling its accident function.

As an interim measure, damaged sections of piping were replaced with a like material. Evaluations are underway to select a piping material that is less susceptible to cavitation corrosion. The inspector discussed this event with plant management and had no further concerns.

No violations or deviations were identified.

9. Safety Assessment/Quality Verification (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 (90712)

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:

*301/91-005 Both Safety Injection Pump Breakers Racked In With RCS Temperature < 275°

This report describes a technical specification violation discovered November 11, 1991, where both Unit 2 safety injection (SI) pump breakers were racked in simultaneously while reactor coolant temperature was below 275° 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. Details are contained in inspection report 266/301/91022.

The primary cause of this event was procedure inadequacy. To prevent reoccurrence, the plant has completed corrective action in the form of procedure revisions to the plant startup procedure (OP-1A). The procedure now provides positive control to maintain one SI pump disabled while coolant temperature is below 275° F. Additionally, operator aids were installed in the vicinity of the four SI pump breakers to remind operators of the technical specification requirements concerning these pumps.

*266/91-015-00 "A" Steam Generator MSIV Bypass Valve Left Open
266/91-015-01 "A" Steam Generator MSIV Bypass Valve Left Open

These reports describe a condition where the "A" steam generator main steam isolation valve (MSIV) bypass was found open while the plant was being shutdown. An investigation determined that the valve had not been shut following completion of MSIV testing (IT-280) about 12 hours earlier. The main safety function of this manual valve is as a steam isolation boundary. It was shut upon discovery of its open position. The company's evaluation of this event determined that the plant remained within the bounds specified in the Final Safety Analysis Report.

An inadequate procedure was determined to have caused this occurrence. The procedure does not specifically direct operation of the bypass valve during the test, although it must be opened to

allow equalizing pressure across the MSIVs in order to open them. Corrective actions have been initiated to revise this test procedure and identify related procedures that have a similar weakness. A broader review and correction of procedure inadequacies in general has been initiated by the plant in response to an earlier violation cited for this deficiency (266/91008-01).

*266/92-001 Turbine Runback Caused by Improper Post Maintenance Testing

This report describes a turbine runback that occurred on January 20, 1992, as a result of improper post maintenance testing on a 4160 VAC bus tie breaker. A maintenance technician installed jumpers across contacts in the wrong breaker cubicle. Corrective action to prevent reoccurrence is being tracked via the notice of violation cited for this event (266/92004-04).

*301/91-004 Containment Isolation Valve Leakage in Excess of Technical Specification Limits

This report describes the failure of containment isolation valve CC-767 to initially pass the seat leakage tests required by 10 CFR 50, Appendix J, for type C isolation valves. Valve CC-767 is a two inch lift check valve located inside containment on the component cooling water supply line to the shell side of the excess letdown heat exchanger. During initial performance of the leak test on October 1, 1991, the check valve did not fully seat while being tested with a low flow test rig. Increasing the flow rate seated the valve disk, and the resultant leak rate was found to be acceptable.

The valve was subsequently disassembled to investigate the seating difficulty and some dirt was found on the valve seating surface. The seat was cleaned and a new o-ring was installed. Continued excessive leakage forced another inspection that revealed the new o-ring to have been defective. It was again replaced and the final post maintenance test was completed satisfactorily.

Valve CC-767 previously failed this test in 1986 and was repaired by replacing the o-ring, spring, and flex gasket. Other similar valves have also occasionally had problems with leakage due to foreign deposits on their seating surfaces.

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 47 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 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 voluntary entries into limiting conditions for operation for the conduct of maintenance. Constructive recommendations are routinely made by the committee based on their reviews, but the plant is sometimes slow to take appropriate corrective action. The committee has recognized this weakness and applied repeated pressure to obtain responses on significant issues. One such concern was an uncertainty in being able to achieve adequate natural circulation cooling of the core with the steam generators in a less than full condition. At the committee's insistence, the plant eventually calculated the requirements necessary to achieve this condition.

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.

No violations or deviations were identified.

10. Follow up of Information Notices (92701)

The effectiveness of the company's program for handling Information Notices (IN) was evaluated on a sampling basis. Select INs were examined to verify that the company performed reviews for applicability, that they received appropriate distribution at the site and corporate levels, and that scheduling or performance of any necessary corrective actions was conducted. The following IN was examined:

a. (Closed) IN 91-62: Diesel Engine Damage Caused by Hydraulic Lockup Resulting from Fluid Leakage into Cylinders

The plant reviewed the information contained in this notice and determined that adequate action is being taken to prevent problems associated with hydraulic lockup of their diesel engines. Point Beach manually turns the engine one complete turn by hand with the cylinder test ports open prior to starting. Any fluids discharged

from the test ports during this evolution are required by the test procedure to be brought to management's attention.

11. Outstanding Items (92701)

Open Items

Open items are matters which have been discussed with Wisconsin Electric management, will be reviewed further by the inspector, and involve some action on the part of the NRC, company or both. Open items disclosed during the inspection are discussed in paragraphs 3.f and 3.h.

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 5.b.

12. Management Meetings (30702)

A Meeting was held between NRC Region III management and plant management on February 14, to discuss items of interest and foster improved communications between Wisconsin Electric and the NRC. Items of discussion included the company's independent audit of their quality assurance program and proposed corrective actions for identified deficiencies, recent plant events, power transmission line stability, and diesel generator testing.

13. Exit Interview (71707)

A verbal summary of preliminary findings was provided to the Wisconsin Electric representatives denoted in Section I on March 16, 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.