U.S. NUCLEAR REGULATORY COMMISSION

REGION III

REPORT NO. 50-266/301-95011

FACILITY

Point Beach Nuclear Plant Units 1 and 2

License No. DPR-24; DPR-27

LICENSEE

Wisconsin Electric Power Company
231 West Michigan Street - P379
Milwaukee, WI 53201

DATES

August 12, 1995, through October 3, 1995

INSPECTORS

T. Kobetz, Senior Resident Inspector
A. McMurtray, Resident Inspector
J. Heller, Senior Resident Inspector, Kewaunee
J. Gadzala, Resident Inspector, Kewaunee
J. Neisler, Reactor Inspector, DRS
D. Butler, Reactor Inspector, DRS
T. Madeda, Security Inspector, DRS
C. Bajwa, Engineer, Spent Fuel Program Office, NMSS

APPROVED BY

Mark J. Faber — 11/15/95

M. J. Faber, Chief
Reactor Projects Branch 6

Date

AREAS INSPECTED

Routine, unannounced inspections of operations, engineering, maintenance, and plant support were performed. Safety assessment and quality verification activities were routinely evaluated. Follow-up inspection was performed for non-routine events. In addition, special inspections of the licensee's independent spent fuel storage installation (ISFSI) and security program were performed during this period.

C-7

RESULTS

Assessment of Performance

The operators performed all duties, including shift turnover and safety equipment surveillance, in a professional and thorough manner. Of particular note was the operator's response to the failure of the turbine governor valve limiter on Unit 1 on September 11, 1995. The quick identification of the failure prevented reactor power from exceeding 100.7 percent and returned power to normal in less than 2 minutes (Section 1.1).

The inspectors continued to note material condition problems in the plant during this inspection period. Oil leaks around the bearing oilers on two safety injection (SI) pumps were noted and mechanical seal leakage on charging and component cooling water pumps was observed during plant inspections (Section 2.0). In addition, problems with control of contractors were once again evident (Section 2.3). Surveillance activities observed this period were very good (Section 2.2).

Concerns were identified in the engineering area. One concern was the technical adequacy of the operability determination for the Unit 1 containment recirculation accident fan coolers during July and August when lake water temperature reached 75°F (Section 3.2). Performance of the final dry runs for loading and unloading of a VSC-24 was very good; however, the inspectors raised some concerns with tolerances in procedures and the vacuum drying equipment (Section 3.1.1).

Concerns were identified in the plant support area. Radiation protection showed an improving trend this inspection period (Section 4.1).

In the areas reviewed security program performance provided an appropriate level of protection to ensure public health and safety. The inspector observed good performance and reliability of security equipment and generally effective implementation of day-to-day security requirements. However, a lack of procedure guidance and weak management overview resulted in a licensee identified failure to implement compensatory measures for two inactive intrusion alarm zones (Section 4.2.2). Weak attention to detail resulted in several NRC identified inadequate package searches (Section 4.2.1). Corrective actions were implemented for each of the findings.

An emergency preparedness drill conducted this period showed improvements in control of response teams and task prioritization (Section 4.3).

Summary of Open Items
Violations: One identified in Section 4.2.1.
Unresolved Items: Two identified in Sections 3.2 and 3.3.
Inspector Follow-up Items: One identified in Section 3.1.1.
Non-cited Violations: One identified in Section 4.2.2

INSPECTION DETAILS

1.0 OPERATIONS

NRC Inspection Procedure 71707 was used in the performance of an inspection of ongoing plant operations.

1.1 Performance of Operations at Power.

During this period inspectors observed routine control room operations. The operators preformed all duties, including shift turnover and safety equipment surveillance, in a professional and thorough manner. Of particular note was the operator's response to the intermittent failure of the turbine governor valve limiter for Unit 1 on September 11, 1995. The quick identification of the failure prevented reactor power from exceeding 100.7 percent. The operator switched the turbine EH controller to manual, repositioned the #4 turbine governor valve, and restored power to normal in less than 5 minutes.

2.0 MAINTENANCE

NRC Inspection Procedures 62703 and 61726 were used to perform an inspection of maintenance and testing activities. The inspectors continued to note material condition problems in the plant during this inspection period. Oil leaks around the bearing oilers on two safety injection (SI) pumps were noted and mechanical seal leakage on charging and component cooling water pumps were observed during plant inspections. In addition, the lack control of contractors was once again evident. Surveillance activities observed this period were very good.

2.1 Maintenance

During the inspection period, the inspector made a detailed listing of 25 various MWR tags found hanging throughout the plant. The inspector discussed work planning and prioritization of the items on the list with the Manager Maintenance. Particularly noteworthy was that 7 of the 25 MWRs had been dispositioned or completed and the tags had not been removed. The inspectors are concerned that if the problem noted on the MWR tag subsequently reappears and the tag is still present that this new problem will not be documented and corrected. The inspectors will continue to review the prioritization and planning of MWRs. The Manager Maintenance explained the new MWR prioritization system that was recently implemented to the inspector and discussed future changes to planning and implementation of maintenance system weeks. The inspectors will continue to monitor these changes to assess their effectiveness.

2.2 Surveillance

The inspectors observed various portions of the overhaul and preoperational testing of emergency diesel generator G02. Also observed

was Station Battery D-106 Discharge Tests and Equalizing Charge and monthly surveillance testing of P-35AE Diesel Engine-Driven Fire Pump Functional Test, Unit 2 Containment Accident Fan Recirculation Fan-Cooler Units, New Fuel Receipt Inspection and Core Power Distribution and Nuclear Power Range Detector Calibration. Overall these activities were very good. The inspector considered the detail of testing and questioning attitude of engineers involved in the GO2 preoperational tests to be a strength.

2.3 Control of Contractors

The licensee experienced several problems with contractors inadvertently cutting cabling during the installation of a new security fence. In addition, a contractor began work on the service water chlorination system without proper authorization. None of these cases resulted in significant safety issues or personnel injury; however, the potential existed. The inspectors have been concerned with the licensee's control of contractors since the Spring 1995 Unit 1 refueling outage and will continue to monitor corrective actions for this issue during the Fall 1995 Unit 2 refueling outage.

3.0 ENGINEERING

NRC Inspection Procedures 37001, 37551 and 60846 were used to perform an onsite inspection of the engineering functions. Improvements were noted in management oversight of the independent spent fuel storage installation project this period particularly during the performance of the final dry runs. However, concerns were identified in the operability determination of the Unit 1 containment accident fan coolers.

3.1 Independent Spent Fuel Storage Installation (ISFSI)

The inspectors observed various portions of the licensee's planning, preparation, and analysis for loading spent fuel into a ventilated storage cask (VSC-24). The inspectors assessed these activities as good.

3.1.1 Observations of Loading and Unloading Dry Runs

In accordance with the Certificate of Compliance (C of C), Certificate Number 1007, the licensee completed dry runs to ensure that the staff were trained and the procedures were adequate to safely load and unload a VSC-24 cask. The dry runs were performed in two phases: 1) a "hands-on," equipment checkout (also see inspection report 266/301-9008 for further inspector assessment of these evolutions) and 2) a complete start-to-finish cask load. In addition, the licensee performed dry runs of unloading evolutions which were not included in the loading sequences.

The inspectors observed selected safety significant evolutions during the dry runs. The final, start-to-finish, dry runs were performed well.

In most cases, the licensee performed activities in accordance with approved procedures and made changes, as appropriate, based on lessons learned during the dry runs. An attempt was made to perform the dry runs in "real time" to identify the actual duration of the process. Since a cask was not being loaded with fuel, some procedural steps were not performed. The inspectors periodically reviewed steps that were omitted and determined that the dry runs still met the intent of the C of C. In addition, the licensee used radiation shielding and took other ALARA measures as appropriate during the dry runs.

However, the inspectors identified the following concerns during the dry runs:

- The SAR required that the MSB be pressurized with water to 22 psia and inspect for leaks after the shield weld is complete. RP-7 Part 6, Step 5.5.14, stated to "maintain a hydro pressure (on the sealed MSB) as indicated on the hydro test sheet for 10 minutes. If necessary, ensure pressure remains below 10 psig (24.7psia)." The inspectors are concerned that the procedure lacks adequate controls to ensure the pressure is maintained at or above 22 psia. The inspectors are also concerned that other procedures may contain similar tolerance problems and will continue to review loading and unloading procedures.

- During both the equipment check-out and the final dry run, the licensee experienced trouble pulling and maintaining a vacuum on the MSB of $\leq$ 3 mm Hg for $\geq$ 30 min. in accordance with step 1.2.7, of the C of C. The licensee was still troubleshooting the vacuum drying system at the close of the inspection period.

These concerns will be tracked by the inspectors as inspection follow-up item (IFI 266/301-95011-01 (DRP)).

The inspectors reviewed the final disposition of licensee condition report 95-411 noting degradation to the modified portion of the road during transporter dry runs. This condition was briefly discussed in Inspection Report 266/301-95008. The modifications to the road were made to the same procedures as the areas surrounding the ISFSI pad and the surface has been repacked to prevent further degradation. In addition, the licensee has committed to identify the safe transporter path when traversing the modified areas. The inspectors have no further concerns with the roadway.

3.1.2 Multi-Assembly Shielded Basket (MSB) Construction

The Region III inspector and a contract level III Radiographer from Idaho National Engineering Laboratory inspected radiographic procedures and reviewed radiographs of welds of the WMSB-24-001 multi-assembly dry fuel storage basket (MSB) at the Wisconsin Electric Power (WEP) corporate offices in Milwaukee, WI.

A total of 72 radiographs were reviewed at the WEP office. All of the radiographs reviewed met or exceeded minimum code requirements relative to film artifacts, densities, labeling and required penetrameter placement and sensitivity. All of the radiography was performed using double-loaded cassettes, however only one set for each weld was reviewed during this inspection. Welds reviewed were :

Weld A (Top longitudinal seam weld): 10 films
Weld B (Bottom longitudinal seam weld): 10 films
Weld C (Circumferential weld): 25 films
Weld D (Bottom head weld): 27 films

Generally, the inspectors agreed with the evaluations of the Wisconsin Electric Level III film interpreter. However, several films show small acceptable welding flaw indications, e.g., porosity or undercut, not reported on the radiographic interpretation sheets.

The radiographs of Weld D, the bottom head weld, showed evidence of rejectable indications which were subsequently repaired and reexamined. The repairs were appropriately documented as acceptable in the final radiographs made subsequent to the repair.

Radiographs reviewed during this audit support the final acceptance of welds on dry spent fuel storage cask WMSB-24-001. The inspectors have no concerns in this area.

3.1.3 Review of MSB Reflood Analysis

Sargent and Lundy submitted two calculations regarding temperature and pressure transients in the multi-assembly sealed basket (MSB) of the VSC-24 storage cask during unloading of fuel from the MSB. The MSB is assumed to be removed from a ventilated concrete cask (VCC) and placed into a multi-assembly basket transfer cask (MTC) for transfer to the spent fuel pool. The entire MSB/MTC package is then flooded with water and lowered into the spent fuel pool.

The first calculation is the fuel temperature transient calculation for the MSB inside the MTC, the second is the MSB reflooding pressure transient. These calculations are in support of the Point Beach Cask Unload Procedure.

The purpose of the first calculation is to determine the maximum fuel temperature and the transient temperature distribution inside the MSB when it is placed inside the MTC. The purpose of the second calculation is to determine the reflood rate for the dry cask storage system that would ensure that the cask pressure did not exceed the maximum allowable pressure of the cask.

Upon review of the two calculations provided by Sargent and Lundy, the NRC staff concludes that the maximum fuel temperature generated, for normal conditions of unloading a VSC-24, does not exceed the allowable temperature of the fuel. In addition, the fuel in the MSB will be

reflooded within 48 hours of its removal from the VCC, and this will further limit the maximum temperature of the fuel. The results of the staff review of the pressure transient calculation also confirmed that the maximum pressure predicted will not exceed the maximum allowable pressure and is acceptable provided the reflood follows the flowrates shown in the calculations and presented below. Exceeding the stated flowrates below could lead to overpressurization of the cask.

During the first 2,500 seconds of the reflood, the flow rate should be set to 0.5 gpm. At 2,500 seconds, the fill rate may be increased to 10 gpm. The fill rate should continue at (or below) 10 gpm until the water level is 18 inches below the top plate. At this point, the fill rate should be set to 2 gpm, until the cask is full.

3.2 Inadequate Containment Accident Fan Recirculation Heat Exchanger Performance Monitoring Testing

In mid July 1995, containment accident recirculation heat exchanger performance monitoring testing was performed on the 1HX-15D heat exchanger. This test was to be used to evaluate the thermal and flow performance of the heat exchanger at design basis conditions. The licensee committed to this test in their response to Generic Letter 89-13. Data from this test was then input into the AIRCOOL program to determine a fouling factor for the heat exchanger. The test in July determined a fouling factor of 0.0014. When the licensee used the 0.0014 fouling factor, they calculated that the heat removal rate for 1HX-15D was less than the 50 Million BTU/hr. specified in the FSAR. The engineering staff choose to disregard the data due to uncertainties associated with the test.

The licensee has used a fouling factor of 0.001 for calculation N-94-065. This calculation supports assumptions in calculations N-94-066, N-94-067, 95-0119, and 95-0120 and JCO 95-05-01.

A review of JCO 95-05-01 and previous surveillance TS-33 and TS-34 "Unit 1 and Unit 2 Containment Accident Fan Cooler (Monthly)" testing showed that cooler flow rates less than the 1000 gpm for assumed accident conditions specified in the FSAR have been accepted.

The containment accident recirculation cooling system is designed to recirculate and cool the containment atmosphere in the event of a loss-of-coolant accident and thereby ensure that the containment is not overpressurized beyond design. If the containment cooling units are not operable both containment spray pumps are required to provide sufficient heat removal capability to maintain the post-accident containment pressure below the design value.

The inspectors have the following concerns with these issues:

- Although the licensee performed an evaluation in accordance with NP 10.3.2, "Justification for Continued Operation (JCO)," they did not perform a formal screening in accordance with procedure NP

10.3.1, "Authorization of Changes, Tests and Experiments (10 CFR 50.59 and 72.48 Reviews)," to ensure an unreviewed safety question did not exist by using a flow rate of less than 1000 gpm.

- The supporting calculations for the JCO assumed a 0.001 fouling factor. The licensee stated that this fouling factor was per the containment cooler design data and the FSAR states that a fouling factor of .001 has been assumed for cooling coil design purposes under normal and design basis accident conditions. However, the FSAR states that computer analysis of the coils showed that the post-accident heat removal rate could be achieved with a fouling factor approaching 0.002 hr-ft^2-0F/BTU. A fouling factor of > 0.001 was never used to bound any of the calculations contained in N-94-065 even after the .0014 fouling factor was calculated after the July Unit 1 containment fan cooler test. Calculations in N-94-065 determined required containment fan cooler flows vs. service water temperatures so that the coolers can properly remove the required 50 Million BTU/hr. heat load during a design basis accident. The licensee had no method to ensure that fouling factors determined by performance testing which were greater than assumed values in Calculation N-94-065 were used to reperform this calculation and determine if this affected JCO 95-05-01.

- Additionally, the inspector noted that non-conservative service water temperature of 70°F and flow rate of 1000 gpm. were used in the AIRCOOL program for determining the performance capability of the 1HX-15D heat exchanger in July 1995 despite the fact that JCO 95-05-01 was in place and allowed service water temperatures up to 76°F and flow rates down to 920 gpm. Also the Service Water System Design Basis Document determined that the design basis service water temperature was 75°F. Weaknesses in the service water heat exchanger performance testing program were noted over two years ago by the NRC Service Water System Operational Performance Inspection. Therefore, it is unclear to the inspectors why 1HX-15D was not declared inoperable during those days in July and August 1995, when the lake temperature exceeded 70°F.

This issue will remain as an unresolved item pending resolution to the above concerns (URI 266/301-95011-02 (DRP)).

3.3 EDG Modification Testing

The inspector observed portions of the 24-hour endurance test of emergency diesel generator (EDG) G-02. During the test, the inspector found that the door and walls of the voltage regulator/relay cabinet were hot to the touch. Review of test records indicated that during the test temperatures inside this cabinet ranged from 155°F to 161°F. The inspector questioned whether components inside the cabinet had been designed or qualified to perform their intended functions at these elevated temperatures. The licensee is currently reviewing records to determine the design temperatures for cabinet components. Since the

cabinet is in the diesel room, it is not considered by the licensee to be in a harsh environment for equipment qualification (EQ) requirements, however, safety related components still must be designed to perform their intended function in their respective environments under all plant conditions. This item is unresolved pending the NRC review of the licensee's design temperature review for cabinet components (URI 266/301-95011-03 (DRS))

EDG G-01 voltage regulator/relay cabinet installation is essentially identical to the G-02 cabinet. Licensee personnel indicated that to their knowledge neither of the EDG's had operated at full load for 24 hours. Therefore, operating temperatures in the G-01 cabinet during extended EDG operation had not been determined.

3.4 Auxiliary Building Crane Test

The inspector reviewed results of the auxiliary building bridge crane test. This is the crane that will be used to move the multi-assembly dry fuel storage basket (MSB) transfer cask in to and out of the spent fuel pool. The test report indicated that the crane's main hoist was tested with a lift of 252,700 pounds which was over 150 percent of the total weight of the loaded MSB and a transfer cask. The loaded auxiliary hoist was tested with a lift of 40,160 pounds, over 150 percent of the weight of cask lids or lifting yoke which are the heaviest loads expected to be lifted by the auxiliary hoist. The inspectors considered the test a conservative measure to ensure crane operability during VSC-24 loading. No concerns were identified.

3.5 Lightning Strike

On August 13, 1995, a lightning strike near the plant caused both the white and yellow instrument channel inverters to transfer to their back-up static inverters such that both channels were being supplied from the same source. The system is designed with interlocks to prevent simultaneous transfer to the backup source. Apparently the interlocks failed to function as designed. The licensee is investigating. In addition, portions of the perimeter security system were disabled resulting in the use of additional security officers as a compensatory measure. Several trouble alarms were annunciated in the control room. The licensee entered into the appropriate LCO and completed system repairs, adjustments and restorations prior to the inspector's arrival on site. The inspector verified that the licensee had initiated actions to identify equipment failures and effect the necessary corrective actions.

3.6 Licensee Action on Previously Identified Items

(Closed) Inspection Followup Item (266/301-95004-06): Plant safety related buses were operating in excess of 4400 volts as a result of transformer tap changes. The inspector questioned whether these voltages were bounded by the plant short circuit analysis. The inspector reviewed portions of the licensee's recently completed fault analysis, calculation 6704.001-C-080, Revision 1, March 2, 1995. The calculation performed on the AFAULT version 3.5, used a fault voltage of 1.05 p.u. for 13.8 Kv, 4.16 Kv and 480 volts systems. The inspector concluded this to be acceptable for the current tap settings. This item is closed.

(Closed) LER No. 266/95-001: On February 28, 1995, with Unit 1 at 100 percent power, an indicating bulb on the 'A' train safeguards relay rack burned out and caused a short that blew a 10 ampere DC control power fuse. This disabled automatic actuation of the Unit 1 'A' train Engineered Safety Features Actuation System (ESFAS).

In response, the licensee replaced the affected light bulb, socket, and fuse. This restored DC control power to the 'A' train in ≈ 1½ hours. A modification was implemented to replace all Unit 1 safeguards relay rack incandescent bulbs with light emitting diodes (LEDs). The LED bulbs screw into the existing sockets and have a high impedance resistor that will prevent excessive current draw if the LED burns out.

The inspectors concluded that the safety significance was minimal. The redundant 'B' train was operable during the ≈ 1½ hours that was required to repair the 'A' train. This LER is considered closed.

(Closed) LER No. 301/95-002: On March 4, 1995, with Unit 2 at ≤ 2 percent power, an indicating bulb on the 'B' train safeguards relay rack burned out. While replacing the bulb, the bulb internally shorted and blew the positive DC control power fuse. This disabled automatic actuation of the Unit 2 'B' train Engineered Safety Features Actuation System (ESFAS).

In response, the licensee replaced the affected light bulb, socket, and the positive and negative fuses. This restored DC control power to the 'B' train in ≈ 1½ hours. In addition, the licensee has replaced all Unit 2 safeguards relay rack incandescent bulbs with light emitting diodes (LEDs). The LED bulbs screw into the existing sockets and have a high impedance resistor that will prevent excessive current draw if the LED burns out.

The inspectors concluded that the safety significance was minimal. The redundant 'A' train was operable during the ≈ 1½ hours that was required to repair the 'B' train. This LER is considered closed.

(Closed) Inspection Followup Item (266/301/93006-04(DRS)): The inspectors reviewed condition report (CR) No. 92-501. The CR evaluated the potential for low 480 volt motor control center (MCC) voltages to

occur during emergency diesel generator (EDG) loading. This condition may occur during simultaneous starting of a containment spray (CS) pump and a service water (SW) pump. Starting of the containment spray pump is dependent on when the containment high pressure signal is received. The point in time that the signal is received is in turn dependent on the break size inside containment.

In response, the licensee determined the break sizes (15.73 to 16.26 inches) that could potentially cause simultaneous starting of the two pumps during EDG loading. In addition, the licensee evaluated the effect of losing 480 volt MCC Nos. 1B03, 1B04, 2B03 and 2B04 due to their undervoltage relays dropping out during load sequencing. The licensee determined the that MCC safeguards loads would be automatically available following restoration of voltage. The licensee analyzed four large break LOCA scenarios and concluded there was little or no effect on the containment pressure response between previously analyzed scenarios and the ones analyzed with delayed MCC voltage restoration. The peak containment pressure was well below the containment design pressure. Further, the licensee determined that the CS pump would have to start within ± 0.5 seconds of a SW pump start. The licensee concluded that the probability for a LOCA, loss of offsite power and a CS pump starting within ± 0.5 seconds of a SW pump to be 3.6E-6 per reactor-year. The inspectors reviewed the licensee's analyses and concluded the probability was very low. This item is considered closed.

(Closed) Violation (301/95004-03(DRP)): The Unit 2 loss of voltage (LOV) relays for bus No. 2A06 were temporarily set at 64 volts (120 volt base) during startup testing of the new bus. The LOV setpoints are normally adjusted to the 92 volt (120 volt base) technical specification (TS) value. However, during the transition from the temporary to the permanent setpoint value, the licensee failed to revise the Setpoint Document back to the permanent value and the LOV relays were left set at 64 volts.

In response, the licensee revised the Setpoint Document to clearly indicate the applicable TS limits for electrical setpoints; trained responsible engineers on the process for initiating and implementing setpoint changes; and performed a safety evaluation for leaving bus No. 2A06 LOV relays set at 64 volts. In addition, procedure No. NP 7.3.8, "Instructions for Making Changes to PBNP Setpoint and EOP Setpoint Documents," was revised, in part, to require that all temporary setpoints be returned to their permanent setting prior to the equipment being returned to service. The inspectors reviewed the licensee's corrective actions and concluded they were appropriate to prevent recurrence. This item is considered closed.

(Closed) Inspection Followup Item (266/301/94012-01A(DRS)): The inspectors reviewed the licensee's setpoint verification program that was approved on July 18, 1995. This program began with a pilot phase that compared the Point Beach program with other two loop Westinghouse setpoint programs. The pilot program was developed to define a common approach to meeting each utility's programmatic and procedural needs in

verifying plant setpoints. Point Beach's setpoint methodology was defined in design guideline No. DG-I01, "Instrument Setpoint Methodology." The design guideline followed Instrument Society of America setpoint methodology recommendations described in Standard ISA-S67.04 - 1994. The inspectors reviewed four setpoint calculations and concluded the calculations were good. The design guideline was user friendly and clearly defined the methodology's approach in developing a setpoint. In addition, the licensee developed a program to determine historical instrument drift information. This information was statistically combined and factored into the setpoint calculations. The use of actual plant drift information is best suited in identifying actual instrument drift characteristics rather than relying on manufacturer drift information. The inspectors concluded the licensee's instrument drift program was very good. This item is considered closed.

(Closed) Inspection Followup Item (266/301/94012-01B(DRS)): The inspectors reviewed the licensee's plans for controlling setpoint calculation design input information, such as measuring and test equipment (MTE) accuracy, that was obtained from test procedures. The licensee indicated they were changing procedure No. NP 7.3.8, "Instructions for Making Changes to PBNP Setpoint and EOP Setpoint Documents," to reference design basis information and setpoint calculations in the Setpoint Document. In addition, the procedure writers guide was to be changed to require the writers to review the Setpoint Document prior to changing design basis information.

The inspectors reviewed recently approved procedure No. ICP-13.009-1, "Condensate Storage Tanks Level Transmitters Yearly Calibration." The specified MTE accuracy was "better than ± 1.26 H_2O." However, the transmitter drift information was based on an accuracy of better than ± 0.75 H_2O. The specified MTE accuracy had the potential to exceed the MTE accuracy assumed in the setpoint calculation. This example shows exactly why the licensee's proposed changes are needed.

In response, the licensee immediately placed a hold on the procedure and issued condition report No. 95-468 to address this item. The procedure had not been used. The inspectors reviewed the CST setpoint calculation and concluded that the potential, additional .5 H_2O error would have little or no effect on the setpoints. The licensee indicated that the instrument technicians typically select the most accurate MTE available. The inspectors reviewed the January 1995 CST transmitters calibration. The MTE selected had an accuracy of ± 0.4 H_2O. The inspectors concluded the licensee clearly understood that procedure design input information must be controlled and that any changes to this information may require an engineering evaluation. This item is considered closed.

(Closed) Inspection Followup Item (266/301/94012-02(DRS)): The inspectors reviewed the degraded voltage setpoint calculation and condition report No. 94-259, "Degraded Voltage Relays Sensitive to Test Voltage Harmonics." The degraded voltage relays use a very accurate peak detector circuit. However, the peak detector circuit is sensitive to voltage harmonics. The degraded voltage relays may not respond

within specified calibration limits if system and MTE harmonics are not removed.

In response, the licensee added the harmonic filter option to the degraded voltage relays and recalculated the degraded voltage setpoint. The inspectors reviewed the setpoint calculation and concluded the calculation met design guideline No. DG-I01 requirements. A degraded voltage technical specification setpoint change amendment has been submitted to NRR for approval. In addition, the licensee has implemented other modifications to improve onsite voltages. The safeguards transformers tap settings were changed to boost the transformers output voltage. To alleviate a degraded voltage reset concern, identified by the licensee's systems based instrumentation and control audit team, the licensee implemented modification No. 94-019, "Degraded Grid Timing Scheme Modification," on Unit 1. The new design permits normal starting of the reactor coolant pumps and will ensure safeguards equipment will have sufficient starting and operating voltages. The modification bypasses the degraded voltage long time delay (TS limit < 60 seconds) coincident with a safety injection (SI) signal from either unit. The licensee demonstrated by calculation that the safeguards buses would remain connected to preferred power sources during an SI. If safeguards bus voltages do not recover above the degraded voltage relay reset value, the starting safeguards equipment will be load shed and sequenced onto the emergency diesel generators. The inspectors reviewed the post-modification test and concluded the licensee had tested all aspects of the Unit 1 modification. This modification will be implemented on Unit 2 during the next refueling outage. Overall, the inspectors concluded the licensee was proactive in addressing degraded voltage concerns. This item is considered closed.

(Closed) Unresolved Item (266/94008-01(DRP)): Special Order PBNP 93-03 was canceled in June 1994 and the operator aid tags were removed after Electrical Engineering determined that this issue was no longer a concern. A technical specification change request was submitted to the NRC in April 1995 to resolve the degraded grid voltage issue. The technical issues with the potential overcurrent condition on bus 1B-03 were addressed with the closure of Inspection Followup Item (266/301/93006-04(DRS)) shown above. This item is considered closed.

(Closed) Inspection Followup Item (266/301/93012-01(DRS)): The licensee completed a historical review of the maximum service water temperature and determined that the design service water temperature was 75°F. This analysis is detailed in DBD-12 "Service Water System Design Basis Document." The inspectors still have concerns with the JCO 95-05-01 and assumptions in supporting calculations N-94-065, N-94-066, N-94-067, 95-0119, and 95-0120. This issue will be tracked under Unresolved Item 266/301-95011-02 (DRP). This inspection followup item is considered closed.

(Closed) Inspection Followup Item (266/301/93012-02(DRS)): Service water heat exchanger performance testing issues will be tracked under Unresolved Item 266/301-95011-02 (DRP) which details the inspectors

concerns with containment fan coolers performance testing. All service water heat exchanger performance issues raised by this IFI will be addressed when the URI is closed out. This item is considered closed.

4.0 PLANT SUPPORT

NRC Inspection Procedures 71750, 81001 and 83750 were used to perform an inspection of Plant Support Activities.

Security program performance provided an appropriate level of protection to ensure public health and safety. The inspector observed good performance and reliability of security equipment and generally effective implementation of day-to-day security requirements. However, a lack of procedure guidance and weak management overview resulted in a licensee identified failure to implement compensatory measures for two inactive intrusion alarm zones. Weak attention to detail resulted in several NRC identified inadequate package searches. Corrective actions were implemented for each of the findings.

An emergency preparedness drill conducted this period showed improvements in control of response teams and task prioritization.

4.1 Radiological Protection

Contamination controls and ALARA practices were good this period. No significant concerns were noted.

4.2 Security

A routine physical security inspection was conducted. Inspection activities included: vital area access control of personnel and vehicles; alarm stations and communications; testing, maintenance and compensatory measures; security training and qualification; and followup to previous inspection findings. The findings and conclusions of the inspection are discussed below.

4.2.1 Access Control-Packages

One violation concerning multiple failures to conduct adequate searches of hand-carried packages was identified. The violation involved inspector observations of inadequate searches and a drill failure. In addition, the inspector identified that some observed hand-carried package searches were conducted in a cursory manner (VIO 50-266/301-95011-04 (DRSS)).

Inspector observation of x-ray search activities on September 12, 1995, showed that although all required packages were x-rayed, none were physically searched. This included computer related equipment which contained power packs and dense wiring which partially or fully blocked the x-ray image from penetrating the devices. Inspector interviews of x-ray operators showed they had identified the devices as computers, PC's, and no further search was necessary. However, they all agreed

components within the computers at times partially or fully blocked the x-ray image. This finding was discussed with the Site Security Supervisor. To verify program adequacy, the licensee, at the request of the inspector, conducted a drill. The scope of the drill was discussed among cognizant licensee personnel and the inspector. The drill was conducted on September 13, 1995, with the knowledge, consent and under control of the licensee. The drill involved concealing a non-operating small caliber pistol in the area adjacent to the power pack of a personnel computer. The concealed weapon was not identified nor was the hand-carried item given a physical search. This is a violation of the licensee's security plan and security procedures which require adequate searches be conducted to prevent the introduction of unauthorized material. The x-ray operator conducting the search was a security supervisor.

The cause of the violation was attributed to personnel errors resulting from complacency and a lack of attention to detail. When identified, the licensee removed from duty and retrained the involved supervisor. In addition, other officers were briefed on the event and advised of management expectations to conduct searches in accordance with security plan and procedure requirements. Inspector observation of searching activities on September 15, 1995, identified no problems. Corrective actions appeared to have been adequate to prevent reoccurrence.

The actual security significance of the finding was low because there was no evidence to support unauthorized material had entered the protected area.

4.2.2 Compensatory Measures

One violation concerning the failure to implement compensatory measures in a timely manner was identified. The violation, which was licensee identified, corrected, and reported involved the failure to implement compensatory measures for two intrusion alarm zones in a timely manner. One zone was not properly compensated for 13 minutes; the other zone was uncompensated for 40 minutes. The failure to implement compensatory measures was a violation of Section 2.1, Paragraph 5.0 of the approved Point Beach Security Plan which requires an outage of any intrusion alarm zone be monitored by a proper security compensatory measure. Our evaluation concluded the violation be treated as a Non-Cited Violation, consistent with Section VII of the NRC Enforcement Policy.

On August 13, 1995, at 11:44 p.m., a lightning strike rendered several security multiplexers inoperable resulting in a loss of detection capability for all security intrusion alarm points and loss of assessment for some security CCTV's. The Security Shift Supervisor (SSS) immediately implemented compensatory measures in accordance with security procedure guidance. During implementation, the SSS became aware staffing levels would not allow for full implementation of compensatory measures. Two alarm zones would not be properly compensated. Emergency call-in of personnel was initiated. Both alarm zones were properly compensated for within 40 minutes.

The event was caused because procedure guidance did not properly address compensatory measure resources necessary to address a catastrophic failure of the security system. The procedure inadequacy resulted from security management's failure to recognize the deficiency during review of procedures resulting from a recent "downsizing" in security shift staffing levels. Prior to the downsizing, staffing levels would have been sufficient to address catastrophic security system degradation or failure.

The actual safety\security significance of this event was minor because unauthorized access did not occur. The potential for unauthorized access was further reduced because an adversary could not predict or easily identify the vulnerability.

The inspector reviewed the event and licensee corrective action, both of which were documented in License Event Report 95-S04 submitted by Point Beach Nuclear Plant under Docket No. 50-301, dated September 12, 1995. Corrective actions were appropriate to preclude recurrence.

4.3 Emergency Preparedness

On August 29, 1995, the licensee conducted an emergency preparedness drill. The inspector observed activities in the Technical Support Center and the Operations Support Center. All activities were conducted well. In response to problems identified in the December 1994 exercise, the licensee implemented team activity and task prioritization status boards which the inspector observed as a significant improvement over past tracking methods.

4.4 Corrective Action on Previous Inspection Findings

(Closed) Violation (266/301-94025-02(DRSS)): An NRC inspector was able to enter, unchallenged, a vital area through a degraded security barrier even though a compensatory measure was implemented to control access. This issue was described in Section 4.d of the above noted report. To resolve this issue, procedures addressing security access controls during compensatory measures and supervisory responsibilities to plan and monitor these compensatory measures for degraded barriers were implemented. The inspector determined through interviews that security supervisors and officers are cognizant of the procedural requirements. This item is closed.

(Open) Inspection Followup Item (266/301-94025-03(DRSS)): Licensee performance in the areas of maintenance support and management effectiveness was weak. These issues were discussed in Section 4.d of the above noted report.

a. (Closed) Maintenance Support: Untimely repair of some security equipment was identified. Priority 3 maintenance requests completion time increased from 2 to 73 days and Priority 4 completion time increased from 51 to 110 days. To resolve this issue, the licensee's security organization re-established a

security maintenance coordinator position to monitor maintenance work activities and licensee maintenance management oversight of security related maintenance work activities was also increased. Inspection results showed Priority 3's completion time was reduced from 53 days to 1.5 days. Priority 4's completion time was reduced from 110 to 94 days. Priority 4's address work activities that are not urgent. Plant management expects Priority 4's to show further reduction in completion time. Inspector review concluded licensee action was effective in reducing the back log and that continued efforts will further reduce the back log of Priority 4's. This item is closed.

b. (Open) Management Effectiveness: Examples were identified by the inspector and the licensee showing security management/supervisory attention to detail regarding implementation of the security program was weak. To address this issue security management added the position of an alarm station coordinator and security operations coordinator. These positions were established to increase oversight activities, improve performance, and increase supervisory awareness. However, since July 1995, the licensee has experienced four security performance failures, each resulting in one hour security reports to the NRC. All four involved security supervision failure to properly implement security requirements. Each resulted in NRC enforcement action. It appears licensee action to improve security management/supervisory performance has not been totally effective. In response to this weak performance, the Shift Security Supervisor (SSS) stated the licensee is evaluating the overall performance of the security organization to identify problem areas and to effect improvement. The SSS stated it is the licensee's intent to present their findings, conclusions and corrective actions resulting from their evaluation during a future meeting with regional security personnel. As of this inspection, no date for this meeting has been established. This item remains open.

5.0 SAFETY ASSESSMENT AND QUALITY VERIFICATION (SAQV)

The inspectors attended several Management Supervisory Staff (MSS) Meetings this inspection period. Many of the meetings discussed safety evaluations (SE) of changes made to the VSC-24 dry cask storage system. The evaluations were being performed in accordance with 10 CFR 72.48. The discussions involved a high level of technical detail and the SEs appear to contain significantly more technical justification than those discussed in inspection report 266/301-95008. However, a final review of the revised SEs will be made during a future special NRC inspection of the issues raised in inspection report 266/301-95008.

Overall assessment of the MSS Meetings was excellent.

6.0 PERSONS CONTACTED AND MANAGEMENT MEETINGS

The inspectors contacted various licensee operations, maintenance, engineering, and plant support personnel throughout the inspection period. Senior personnel are listed below.

At the conclusion of the inspection on October 3, 1995, the inspectors met with licensee representatives (denoted by *) and summarized the scope and findings of the inspection activities. The licensee did not dispute any of the issues discussed or identify any of the documents or processes reviewed by the inspectors as proprietary.

*G. J. Maxfield, Plant Manager
A. J. Cayia, Production Manager
*F. A. Flentje, Administrative Specialist
W. B. Fromm, Manager - Systems & Component Engineering
C. M. Gray, Duty Shift Superintendent
T. C. Guay, Health Physics Supervisor
*F. P. Hennessy, Manager - Chemistry
N. L. Hoefert, Manager - Production Planning
*T. J. Jessesky, Quality Assurance
*J. A. Palmer, Manager - Maintenance
J. C. Reisenbuechler, Manager - Operations
*D. D. Schoon, Regulatory Services Manager
J. G. Schweitzer, Maintenance Manager
R. D. Seizert, Training Manager
G. R. Sherwood, Manager - Instrument & Controls
*T. G. Staskal, Sr. Project Engineer - Performance Engineering
*M. F. Baumann, Manager - Nuclear Fuels Services
*P. D. Bronk, Project Manager - ISFSI
K. R. Aundensun, Project Manager - ISFSI
*T. G. Malanowski, Sr. Project Engineer - Licensing/Rad. Engineering
*J. F. McNamara, Manager - Design Engineering
*S. W. Greco, Project Engineer - Mechanical Evaluations
*M. K. Conry, Sr. Project Engineer - Chemical
*P. W. Huffman, Project Engineer - System Engineering
*S. D. Bowe, Supervisor - Instrument & Controls