DCD | DMB

MAY 24 1994

Docket Nos. 50-266; 50-301

Wisconsin Electric Power Company
ATTN: Mr. R. E. Link
Vice President
Nuclear Power
231 West Michigan Street - P379
Milwaukee, WI 53201

Dear Mr. Link:

SUBJECT: POINT BEACH EVALUATION AND ASSESSMENT TEAM SITE VISIT, APRIL 18-22, 1994

As you are aware, a team of NRC personnel from headquarters and Region III was at the Point Beach site during the week of April 18 as part of a trial program intended to improve the overall NRC inspection process. Prior to this visit, the evaluation team conducted an historical review of plant performance. The purpose of this overall effort was to integrate the results of the recent inspection efforts at Point Beach, to provide the licensee with the current NRC view of their performance, and to make recommendations regarding the direction of future inspection activities at Point Beach. A trip report, attached, describes the results of our visit. The team made observations, conducted numerous interviews and reviewed documentation in each of the areas discussed in the attached report.

The team identified areas where improvements were being made as well as areas in need of improvement. In particular, the performance of control room operations was considered weak. We note that your operators have contributed to the station's historically good operating record, but the team noted instances of poor communications, a lack of formality, and limited oversight of plant operations provided by your senior reactor operators. Significant management attention is needed to address these deficiencies. Your plans to address these concerns were the topic of a management meeting held in Region III on May 15, 1994. Also of concern was an expressed reluctance on the part of some of your staff to document problems through the condition reporting system. This concern, coupled with ineffective trending of problems, was considered a weakness in your corrective action program that also warrants management attention.

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The team was pleased with the level of candor in our discussions and interviews with the plant staff. We believe that this was a significant contribution toward making this trial assessment successful. If you have any questions or comments on this report, please contact me at (708) 829-9601.

Sincerely,

ORIGINAL SIGNED BY T. O. MARTIN

T. O. Martin, Deputy Director
Division of Reactor Projects

Attachment: As stated

cc w/attachment:
G. J. Maxfield, Plant Manager
OC/LFDCB
Virgil Kanable, Chief
Boiler Section
Cheryl L. Parrino, Chairman
Wisconsin Public Service
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NRR	RIII	RIII
TGody,Sr.	HMiller	TMartin/bs
5/24/94	5/24/94	5/24/94

E-MAIL
See attached

REPORT OF THE POINT BEACH EVALUATION AND ASSESSMENT TEAM
APRIL 18-22, 1994

1.0 SCOPE AND PARTICIPANTS

A team of NRC personnel from headquarters and Region III visited the Point Beach site for a one week period as part of a trial program intended to improve the overall NRC inspection process. During this visit the team made observations of activities, conducted numerous interviews of staff, and reviewed documentation. Prior to the onsite visit, the team also formulated evaluation attributes and conducted an historical review of plant performance. The purpose of this overall effort was to integrate the results of the recent inspection efforts at Point Beach, to provide the licensee with the current NRC view of their performance, and to make recommendations regarding the direction of future inspection activities at Point Beach. The plant was evaluated in the following areas: (1) Licensee Control Systems; (2) Operations; (3) Maintenance; (4) Engineering; and (5) Plant Support. Four or five subelements were established within each of these areas as shown on an "assessment tree" at the end of this report. At the conclusion of the onsite visit, the tree was color coded to indicate future inspection emphasis. The following color code was used: red designates a recommendation for above average inspection emphasis, yellow designates a recommendation for an average amount of inspection emphasis, and green designates a recommendation for reduced inspection.

The following team members participated in this visit:

T. O. Martin, Team Leader
M. R. Johnson, NRR
M. J. Farber, Region III
M. Shannon, NRR
A. Hansen, NRR
S. D. Burgess, Region III
N. Shah, Region III

2.0 PLANT STATUS

During the visit, Unit 1 was in a refueling outage and Unit 2 was operating at power.

3.0 LICENSEE CONTROL SYSTEMS

Summary

Point Beach used a Condition Report (CR) system to identify and correct problems. This system was implemented in 1992 and was generally effective however it was not used consistently. Root cause analyses were good. Trending was not providing any significant value. Corrective actions appeared to be effective but were difficult to evaluate because of the lack of trending and the fact that due dates were routinely changed. Self assessments were performed on a limited

basis by some work groups. In addition to the relatively new implementation of the CR system, the licensee also undertook a significant human performance review in 1993 that has the potential to produce positive results. The plant appears much more willing to change than in the past.

The core inspection program in this area is appropriate. Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems" should be implemented in entirety, emphasizing timeliness and adequacy of corrective actions, effectiveness of trending, and whether the Condition Reporting system is being used consistently.

3.1 Problem Identification

The plant had a common system to identify equipment and human performance problems, but it was not being used consistently.

Point Beach used a Condition Report (CR) system to identify and resolve a variety of material and human performance problems. CRs could be written by anyone and would be assigned a priority and assessed for operability. Corrective actions were tracked on a computer database. A root cause analysis would be performed if appropriate. Over 800 of these reports were issued in 1992, about 500 in 1993, and about 150 so far in 1994. Although this system was generally positive, there were some problems.

- The group that generates the CR was not being tracked so that there was no assessment of the degree of participation by various organizations. The numbers of CRs written dropped off considerably since 1992.

- There was reluctance expressed by some personnel, such as in Operations and Maintenance, to write a CR because they felt that in some cases they might draw negative attention to themselves or their coworkers. Interviews revealed that there was a general reluctance for licensee staff to identify their own problems.

The audit program was generally effective.

A review of various audits and discussions with QA auditors revealed that appropriate issues were being identified through the audit process. The licensee also was implementing a vertical slice technical review program that was effective at identifying problems. A recent example was the vertical slice review of the service water system. However, the audits of operations before the team's visit failed to identify any of the type of the control room informality concerns that the team identified. An audit of operations that included an outside expert was ongoing at the time of the team's site visit and, according to the licensee, did identify findings similar to the team's.

In late 1993, the licensee established a Human Performance Team to provide department-wide guidance on human performance factors.

The Human Performance Team consisted of relatively high level licensee managers that provided recommendations for work review, event reporting, work group problem solving, close call/near miss logbook, increased use of project liaisons, training, and self checking. This appears to be a positive initiative but has not been in effect long enough to observe results.

Inspection recommendations: The originating organization of a CR was not being tracked therefore it was unknown if a particular site group was not supporting the program, in addition, segments of the staff were reluctant to generate CRs. It should be identified whether any particular group is not generating CRs, and, if not, how they are identifying and correcting their problems. These issues should be folded into the implementation of IP 40500.

3.2 Root Cause Evaluations

Root cause evaluations were thorough.

Condition reports were screened to determine the need for root cause analysis (RCA). Twenty-one received an extensive RCA in 1993 and six so far in 1994. These analyses appeared to be thorough and corrective actions were clearly identified and tracked.

3.3 Trending and Evaluation of Problems

The trending of issues from the Condition Report system was not providing any significant benefit.

Trend reports were being issued based on the data collected from the CR system, however they were not of any significant benefit for several reasons:

- The trend categories were generally too narrowly focused such that the data may not be meaningful and any resultant corrective action taken may also be too narrowly focused. Examples of some of the categories tracked included loose lugs, red tags, boration, purchase order discrepancies, and fuse control.

- Interviews with site management revealed that the trending reports were of marginal benefit.

- The numbers of CRs being written was considered low and interviews revealed that some site personnel were not participating.

Key business plan indicators were being tracked.

Several key indicators were being tracked on a periodic basis. These included safety system unavailability, personnel radiation exposure,

reactor trips from power, and human performance related events. This system appeared to be effective in drawing management attention to major trends of plant performance.

Inspection recommendations: Review trend results from the CR system to determine if appropriate issues are being tracked and repetitive problems are being identified. Are trend results providing any benefit to management?

3.4 CORRECTIVE ACTIONS

Corrective actions from CRs were being tracked, but it was difficult to assess their effectiveness because of the lack of effective trending and the policy of frequently changing due dates.

Corrective actions identified to address CRs appeared reasonable and were tracked on a computer database. However, the team was unable to determine how responsive the licensee was to implementing corrective actions. Due dates were rarely exceeded because these dates were frequently changed. The licensee tracked the percentage of corrective action items with changed due dates (about 25%) and the number of times due dates were changed (once, twice, and 3 or greater). Also, the lack of effective trending as discussed above contributed to the difficulty in evaluating corrective action effectiveness.

Inspection recommendations: Review the timeliness and adequacy of the resolution of CRs.

4.0 OPERATIONS

Summary

Facility operations appeared to be satisfactory based on the sustained performance of both units over the last year and the good results from the operator license exams. However, based on the observations and reviews there appeared to be weaknesses in management oversight of operations, safety focus, the condition reporting system and the general conduct of operations such as log keeping, turnovers, training and non routine operations. An excessive focus on outage work process activities in the control room detracted from the routine monitoring of plant conditions.

The core inspection program (IP 71707) should be implemented in this area without reduction. Additional focus and resources should be provided for non-routine evolutions such as startups, shutdowns, power manipulations, and outages. Regional initiative IPs such as 71711 and 71715 should be considered for this purpose.

4.1 Safety Focus/Management Involvement

Management oversight of the operations department was considered to be weak based on control room observations that included a lack of control

room formality, a limited use of procedures, a high administrative burden on the SROs, and the failure of the operations staff to follow the guidance in the Point Beach Operations Manual. Management was routinely present in the control room and should have identified some of the deficiencies and initiated corrective actions.

- Both of the on shift reactor operators sat with their backs to the control panels for long periods.

- Both of the on shift reactor operators and the duty shift supervisor were in the back panel area for over 10 minutes. The duty operating supervisors were in the control room, but they were busy with switching and tagging and were not monitoring the control panels.

- Few of the many people that entered the controlled area in front of the main control panels asked for permission to enter.

- Although there were many alarms during the course of the day, no operators was observed reviewing an alarm response procedure.

- Control room communications was very informal with little use of repeat back communication techniques.

- The oncoming duty operating supervisor manipulated an out of position valve, NaOH tank isolation, on the shutdown unit control board and did not inform the reactor operator for that unit.

- The two duty operating supervisors were substantially involved with the switching and tagging process and appeared to conduct very little control room oversight, even while the duty shift supervisor was absent.

- The duty shift supervisor was involved with coordinating various work activities and testing, in addition to other demands outside the control room. It appeared that he provided minimal control room oversight.

- Additional management oversight problems were identified in various NRC inspection reports 93-09 and 94-02.

- Many operations personnel indicated that operations was still staffed at a skeleton level even with the increase of SROs on shift and the implementation of the work control center. Plant staff indicated that the licensee was now entering LCOs prior to and after the refueling outage in order to complete surveillances normally completed during the outage.

- The dress of some control room operators was noted to be informal and did not meet the licensee's own standards.

NRC inspection reports also identified concerns regarding the adequacy of the safety focus of the operations staff.

- Inspection report 94-02 stated that the plant process computer indicated that the quadrant power tilt exceeded 1.02 and the operators continued the power ascension.

- Inspection report 94-15 stated that the licensee had relaxed their controls over the reactor vessel level instrumentation alignment. The licensee did not ensure that the valves were maintained with the same red tagging controls documented in a previous commitment.

Inspection recommendations: The resident inspector should routinely monitor control room activities and adherence to the guidance in the Point Beach Operating Manual.

Inspectors from other sites should be tasked with monitoring control room activities in order to obtain an independent perspective on the conduct of operations.

The resident staff should maximize inspection activities during periods when the plant is performing non routine evolutions or when the plant is in an abnormal condition. This should include emphasizing the performance of required backshift observations during periods of non routine evolutions.

The resident inspector should closely monitor control room activities to ensure that at least one SRO is in direct control of licensed activities and is not overburdened with other administrative tasks.

The resident inspectors, with the assistance of other assigned inspectors, should follow the licensee's corrective actions to resolve the operator concerns.

On February 6, 1994, a flux tilt problem was experienced during a power escalation. The licensee's self-assessment, documented in condition report 94-31, noted various problems with the conduct of the downpower and return to power evolutions. This self critical aspect of this assessment appears positive, however the complexity of this event warrants additional NRC review.

4.2 Problem Identification/Problem Resolution

The condition reporting process used to report and resolve problems was being used inconsistently.

- Some reactor operators stated that they did not initiate any condition reports.

- Operators had concerns that if they initiated condition reports, it would be held against them at appraisal time.

Inspection recommendations:

Inspectors should identify situations that would warrant the initiation of a condition report and ensure that corrective actions are implemented.

The resident inspectors should continue to evaluate the level of support by operations management for the condition reporting program.

During the implementation of IPs 40500 and 71707, inspection focus should be directed at the condition reporting process implemented by the operations staff.

The resident inspectors should select several events, perform a detailed review, and compare it to the licensee's review in order to evaluate the adequacy of the licensee review.

The residents should conduct tours with the auxiliary operators in the field and evaluate the extent of repairs by operators prior to initiating a maintenance work request or a condition report.

4.3 Quality of Operations

Control room logs did not meet the licensee's standards in that they did not provide sufficient detail.

Review of the control room logs found that the logs were not complete. The start and stop times for evolutions were not always documented. An example where the importance of good logkeeping can be shown was found in condition report 94-31. The evaluation stated that logging practices for operators was inconsistent. The channel deviation alarm was not recorded for this alarm and adjustments of the Nuclear Instrument potentiometer settings were also not logged. The failure to log these items complicated the licensee's efforts to reconstruct the events on February 6, 1994, dealing with Quadrant Power Tilt and Axial Flux Deviation problems. The licensee's audit program also identified significant weaknesses in logkeeping.

Watchstation turnovers were considered weak.

Following a short term watchstation turnover, it was reported to the new watchstander that divers were in the water. When the normal watchstander returned, he was not informed that divers were in the water. Shift turnovers exchanged information which was not necessarily documented in the log or on the turnover sheets. The shift meeting did not integrate the turnover information from the individual watchstations. The shift meeting was directed at providing a general overview of plant status and the distribution of work to be completed by the shift.

The operations staff appeared to be knowledgeable and confident; however, there were indications of specific training weaknesses.

The training department raised a concern with operator training in that operators had difficulty getting vacation and would therefore take vacation during their training week. This caused problems with the training department having to track down the individuals to ensure that they completed self training. The training department also had a concern that operators needed to improve their watchstanding skills and needed to improve their attention to detail. It was noted that some of the auxiliary operators could not locally emergency start the emergency diesel generators. Operations personnel were trained a year ago, but a recent sample found that approximately 30 percent still had difficulty performing this task.

Inspection recommendations:

Continue to monitor control room watch station reliefs and determine whether there is an open exchange of information during both shift and temporary reliefs.

Monitor progress in resolving identified training weaknesses, including missed training for licensed operators.

Monitor non routine operation's evolutions using the site resident inspectors with occasional assistance of other resident inspectors. The focus of the observations should be to ensure proper control, communications, adherence to procedures, and evaluation of procedure adequacy.

While monitoring control room activities, sample control room logs for accuracy.

4.4 Programs and Procedures

The lack of procedure usage was a concern even though no problems were identified with procedure content.

The team noted that the operators did not routinely use operating procedures or alarm response procedures.

Inspection recommendations:

Closely monitor alarm response and other operational activities requiring procedures to ensure they are used when necessary and determine if unauthorized operator aids are utilized.

5.0 MAINTENANCE

Summary

Overall, maintenance was considered acceptable based on increasing

management involvement, generally good plant material condition, and the existence of an experienced maintenance staff. Some concerns were identified in the maintenance area, including weak electrical/mechanical procedures, problems with a new software system for maintenance management, and the need for an on-going self-assessment program. The maintenance department has implemented several new programs to improve performance, though some of these efforts are just now beginning to mature.

An increased level of inspection effort to supplement the core program is warranted after some of the new maintenance initiatives have had time to mature. This should include a team of 2 or 3 inspectors on-site over a 2 week period or possibly a single inspector over a longer period of time.

5.1 Management Involvement/Safety Focus

Management involvement in maintenance activities and management concern for nuclear safety was adequate.

On-site inspections and interviews revealed that maintenance management is apparently involved in most day-to-day and programmatic activities. This is evidenced by the team's observations of supervision in the field, establishment of reasonable performance goals, and management involvement with technicians in the procedure upgrade program. Safety focus appeared appropriate based on a lack of safety significant work items in the backlog, management's development of performance goals, and observations on site. In particular, the team observed the licensee's response to their discovery of a pinched in-core thermocouple cable. Craft workers immediately informed their supervisors, the supervisors quickly formulated a work plan, with buy-in from their management, and the cable was properly repaired.

There were some examples of limited safety focus and lack of management involvement identified from inspection reports and QA audits and surveillances. Examples include SI pump maintenance (when equipment was returned to service for one month while the pump and motor oils were analyzed) and the extended period for implementation of an MCCB testing program. On-site interviews revealed that engineering had developed a "top 140" list of maintenance items, prioritized using a rating system which included many factors, including risk. However, the maintenance department continues to use their own prioritization scheme, which does not utilize formal risk analysis.

Inspection recommendations: During implementation of IP 62703, monitor mechanical-electrical group participation in work scheduling and progress in completing the "top 140", paying particular attention to work prioritization and differences between engineering and maintenance priorities.

5.2 Problem Identification/Problem Resolution

Self-assessment activities and the use of the station's condition reporting program were limited and did not provide a useful feedback mechanism.

Of those interviewed, few of the maintenance staff were familiar with the concept of on-going self-assessment. One self-assessment was performed in September 1993 at the direction of the Maintenance Manager. Although it was not particularly enlightening, it was viewed as a foundation for future efforts. A second assessment was planned for June 1994.

Interviews with members of the maintenance staff from worker level to supervisors revealed a lack of interest in the plant's condition reporting system. A prevailing philosophy was that the problem should be rapidly fixed and then a condition report was no longer needed. The staff did not recognize the need to trend problems with the intent of identifying root cause and preventing recurrence.

Members of the mechanical-electrical staff were not aware of performance concerns from other departments in the plant.

Interviews with mechanical-electrical staff and supervision revealed a protective attitude and a perception of their own performance that was not shared by other departments in the plant. Mechanical-electrical personnel characterized their relationship with other departments as cooperative and successful. This view was not shared by other departments who viewed the mechanical-electrical organization as not exhibiting good teamwork. This was most notable in the area of work scheduling and prioritization where the group has attempted to retain control over what maintenance actions are performed without regard to the existence of the production planning group and the preferences of the operations department. There is some evidence that current performance concerns have roots in past practices and that present performance is actually somewhat better than perceived. The Maintenance Manager was aware of this situation and was working to resolve existing performance problems and improve perceptions.

The new database system for work request management, tracking and trending, backlog management, and component histories has performance problems.

The CHAMPS II system was procured as an upgrade to existing CHAMPS software. However, to date the system has not met expectations. The backlog can not be adequately viewed, tagging has to be done by hand, and implementation of formalized tracking and trending is on hold. If the system is not fixed in a timely manner, these inadequacies may lead to ineffective control over maintenance activities. Management was fully aware of these problems and was committed to resolve them, though it appears that adequate resources to resolve this problem were not allocated.

Inspection recommendations:

Implement IP 40500 to: (1) review the second maintenance self-assessment (tentatively scheduled for June 1994), evaluating the thoroughness and significance of findings; (2) monitor the use of the condition reporting system by maintenance personnel; and (3) review recently completed MWRs and determine if condition reports should have been written.

Monitor licensee's progress with implementation of the CHAMPS II software. Determine to what extent the system is used for tracking and trending and other maintenance needs.

5.3 Material Condition

Review of inspection reports revealed some system and component concerns.

Review of inspection reports revealed recurrent failures of the EDGs, indicating that the condition of these systems may not be adequately maintained. In addition, the reports noted multiple test failures of MCCBs, indicating potential age-related degradation of these components.

General material condition of the plant was good.

Material condition was evaluated on the basis of on-site examination of existing steam, water, and oil leaks, and the condition of valve stems and packing, pump seals, motor air intakes, oilers, and hangers. The steam plant and the primary plant inside containment were in excellent condition. There were only a few existing leaks on the steam plant and these were identified and properly tagged. One significant material condition problem was oil leakage on the main generator hydrogen seal oil skids, which had been identified by the licensee, but had not been resolved. Material condition of the systems in the auxiliary building was good but not at the same level as the steam plant. Several catches for radioactive leaks were noted as well as boron crystal on the seals of the safety injection and containment spray pumps and some valves.

Housekeeping, especially equipment storage, needs additional attention.

Examination of the operating unit during plant tours revealed a problem with storage of equipment and tools. Many examples of equipment placed against a wall, tied off to columns, or left unattended and unattached were noted. Measuring and test equipment was also found lying on the floor, and small loose parts were lying on one Unit 1 SI pump skid.

Inspection recommendations:

Closely monitor future EDG maintenance efforts. Monitor the MCCB replacement and testing program.

Monitor observable equipment deficiencies, especially pump and valve leakage, in auxiliary building systems to determine if they are being

adequately resolved.

Monitor licensee's efforts in improving equipment and tool storage.

5.4 Quality of Maintenance

The quality of maintenance work was generally good, though there were some lapses.

Observations of maintenance in progress showed that the craft were attentive to their task, knowledgeable, and took pride in their work. When problems surfaced, workers did not hesitate to contact their supervisors for assistance. This assessment was borne out by the generally good material condition of the plant and its continuing successful operational history.

Some weaknesses in job control practices were identified. Examples include an EDG not being rotated after maintenance, leading to a condition where both EDGs were inoperable, and a charging pump motor not being rotated after maintenance (before re-connection to the pump), resulting in mechanical failure of the pump due to backwards rotation.

Inspection recommendations: Using IP 62703, monitor maintenance in progress to assess control of activities and ensure that quality of maintenance does not deteriorate.

5.5 Programs and Procedures

Maintenance management has recently initiated a number of new programs whose effectiveness has yet to be seen.

To improve maintenance effectiveness and the department's relationship with other site organizations, management has implemented programs covering a broad scope of maintenance activities. Some of these programs have already demonstrated some effectiveness, others have not yet begun to show results. These programs include:

- Maintenance standards handbook
- conversion from job performance measures to practical factors
- minor maintenance program
- joint review of maintenance work requests by the maintenance and operations department coordinators
- system "weeks" concept
- maintenance supervisors are now part of the planning and scheduling process
- living maintenance schedule.

While the procedure upgrade program is proceeding well in the I&C area, there continue to be notable examples of weak procedures causing problems with mechanical-electrical maintenance.

Inadequate procedures have led to several problems, as noted in the

inspection report review. For example, both EDGs were inoperable on one occasion due to procedural inadequacies. The licensee has instituted a procedure upgrade program to address these concerns, but so far the program for mechanical-electrical procedures has not been effective. Problems with budget, staffing, and quality of both the contractor-delivered drafts and the final procedures have all combined to slow progress and little of any substance has been accomplished. Priority has been raised on completion of this program.

Inspection recommendations:

Evaluate effectiveness of new management programs. Determine if initiatives are being integrated into the maintenance process and if they are effective.

Monitor output of mechanical-electrical procedure upgrade program for increases in quantity of procedures; sample new procedures to ensure good quality.

Evaluate adequacy of procedures and work instructions for new tasks by observation of work activities and review of work documents.

6.0 ENGINEERING

Summary

Ergineering was considered acceptable based on management's continued involvement, programs initiated to focus and prioritize engineering work, and the continued good quality of engineering work. Because of many new programs and procedures, the engineering organization continues to be in a state of organizational and functional change.

Core inspections in the engineering area need to continue with additional focus on the implementation and effectiveness of the new programs. The resident should focus on the IST interface between engineering and operations.

6.1 Safety Focus/Management Involvement

Management involvement in the engineering organization was apparent with the recent organization changes.

The Engineering organization at Point Beach continued to be in a state of change. The most recent change placed oversight of site engineering and corporate design engineering under one manager. Because this change occurred approximately two weeks prior to the team's arrival, the effectiveness of the change could not be assessed. Discussions with engineering staff indicated that the change was intended to foster improved communications between the engineering organizations.

Management's biggest challenge continued to be the effective utilization of the engineering staff. Clear responsibilities have to be understood

by the engineering staff and other organizations such as maintenance and operations. Credibility also has to be proven and established before the system engineering program can be considered effective.

Operability determinations adequately documented the basis for declaring affected systems operable.

CRs reviewed indicated that operability determinations were conservative and reflected appropriate TS and regulatory requirements.

Safety focus for engineering work was improved with a new work prioritization program and procedure.

The program, implemented ten months ago, provided a uniform basis of prioritizing work in the engineering organization based on nuclear and public safety, personnel safety, plant economic performance, regulatory impact, and personnel productivity enhancements. The system implemented a weighting factor that resulted in assigning a priority from 0 to 99. This appeared to be a reasonable prioritization method.

The modification backlog was prioritized using the new system, resulting in the elimination of over 70 modifications that received an overall priority of 13 or below. The probabilistic safety assessment organization reviewed the new prioritization system and agreed that the process properly considered risk significance. Engineers agreed that the system was effective in identifying safety significant work and focusing engineering resources.

Inspection recommendations: Review the work prioritization program for proper implementation and ensure that risk significant factors continued to be appropriately considered in the process.

6.2 Problem Identification/Problem Resolution

The Engineering Work Request (EWR) program was an effective process to identify, track, and coordinate engineering work.

The EWR program was initiated in November 1993 to provide a means of requesting engineering services/support to address internally identified problems or issues that did not meet the criteria for the CR system.

The team reviewed approximately 80 EWRs and identified four that addressed improperly sized breakers that appeared to meet the condition report (CR) system criteria. The licensee agreed with the team's assessment and initiated a CR. Although considered an effective process, the licensee must ensure that the EWR system is not used to address issues that warrant a CR.

Prioritization of Maintenance Work Requests (MWRs) was effective in identifying safety significant work.

In an effort to reduce the MWR backlog, system engineers and operations

prioritized 20 MWRs in their systems for work completion. Although considered an effective program idea, the maintenance department was not included in the MWR prioritization. Because of this, maintenance appeared to be less supportive of the program than operations and engineering.

System and component trending was informal and not considered proactive.

System and component engineers performed some trending; however, most of the trending was self-contained, informal, and was not proactive in nature. Although not yet implemented, system performance trending would be expected from system engineers. The engineers stated that proactive trending was not currently attainable because of the time required for emergent work.

Inspection recommendations:

Review selected Condition Reports for the adequacy of engineering's evaluation and disposition.

Review maintenance work requests, CRs, and EWRs for problems identified by the engineering staff that would indicate whether the engineering organization was proactive in identifying and seeking the resolution to equipment problems. Assess the licensee's ability to identify potential problems before they are self revealing.

Continue to review the EWR system to ascertain if the system is: (1) identifying and resolving technical engineering issues, (2) properly used and controlled, and (3) is not being used as a substitute for the CR system.

6.3 Understanding Design

The Design Basis Documentation (DBD) program was nearly complete, but the results were not yet available for use by site engineering.

Although the DBD program was established 2-3 years ago in the Milwaukee office, its use and visibility at the site were new. The DBD program was nearly complete; however, only two system DBDs were distributed to the site. The licensee anticipated 20 completed DBDs on site by the end of this year.

Site engineers were skeptical of the DBDs usefulness since the project was performed in the Milwaukee office and the draft DBDs that were reviewed contained errors. The engineers indicated that design base information, although at times difficult to obtain, was generally available for their use. Engineering management viewed the documents as a necessary tool for all engineers and anticipated its use in resolving plant problems, performing operability determinations, and developing system modifications.

6.4 Quality of Engineering Work

The engineering staff was knowledgeable, competent, and experienced.

Although the system engineer program was relatively new, the engineers assigned had 5-8 years experience in either component engineering or other organizations within Point Beach.

The engineers exhibited a clear sense of ownership and responsibility for their assigned systems/components. All showed good involvement in maintenance and design issues ongoing in their systems/components. Root cause evaluations and 10 CFR 50.59 evaluations were thorough and well documented to support decisions made.

Point Beach had received a significant engineering inspection in the service water system approximately eight months ago. Results from the inspection indicated that the quality of engineering work was considered a strength due to their use of plant specific service water flow modeling and thorough supporting calculations.

A self-assessment of the engineering organization was planned.

The licensee planned to perform an engineering self-assessment in May 1994. The team considered this a good initiative to evaluate the site engineering organization and the new programs.

Inspection recommendations:

As part of IP 40500, review the licensee's engineering self assessment results.

6.5 Programs and Procedures

Point Beach continued to implement new programs to facilitate the organization changes in engineering.

Some programs, such as work prioritization, have shown immediate benefits. Programs such as system engineers and the EWR system will take a longer period of time before effectiveness can be determined. The team determined that management had to stay focused on evaluating the new programs' effectiveness.

Engineering assignments and responsibilities were clearly understood by all of the engineering staff.

In general, site engineering was designated for the support of maintenance and operations related issues. Corporate engineering was designated for the support of design related issues, including modifications and the design basis. All modifications were performed in the corporate office by the design engineers, since system and component engineers were recently relieved of all modification duties. System and component engineers may perform minor modifications, but those have been

infrequent.

System and component engineers effectively worked with operations and maintenance.

The plant fully implemented a limited system engineering program about 2 years ago. The program consisted of six plant system engineers that supplemented six operation crews that also had system responsibilities. This assignment appeared to foster a dual "ownership" role and enhanced the communications between the two organizations. Component engineers were closely associated with the maintenance organization and component programs such as the MOV and AOV testing programs.

Inspection recommendations:

The effectiveness of the IST program relies heavily on the interaction between operations and engineering with operations performing the testing and providing the data to engineering. Review and observe selected IST tests to determine if problems and data are effectively communicated to engineering. Interviews indicated that there may be some problems in this area.

7.0 PLANT SUPPORT

Summary

Performance in Plant Support, including the radiation protection (RP), emergency preparedness (EP), security, fire protection (FP) and chemistry programs, appeared good. There were no major inspection findings in these areas and performance indicators (dose, personnel contamination events, safeguards events, etc) have shown good and improving performance.

The RP core inspection program should be reduced. A minimum inspection effort consistent with the core program for chemistry, EP, and security should be continued. Additionally, a routine specialist inspection should be performed to evaluate the technical aspects of the fire protection program. The overall inspection effort should focus on problem trending (section 7.2) and contamination control (section 7.4). Teamwork between departments (section 7.1) also bears monitoring, as indicated by expressed concerns that work groups were not supporting one another.

7.1 Safety Focus/Management Involvement

Performance and field observations indicated good safety focus.

During tours, workers were observed using good radiological work practices and were generally knowledgeable of radiological conditions. Also, security guards appropriately manned posts and appeared to have positive control over protected and vital area access. Regarding fire protection, "fire sensitive areas" identified during the Outage Safety

Assessment were communicated to the plant staff. Additionally, a review of work orders and discussion with workers suggested good adherence to the station transient combustible and ignition control procedures. Chemistry parameters remained within EPRI recommended values and chemistry management were knowledgeable of industry issues. Scenarios in EP exercises were based on accidents identified in probabilistic risk analyses.

Intradepartmental communication was good.

Good intradepartmental communication was noted and workers generally felt comfortable raising issues with management. Interviews with workers and direct observation by inspectors verified that managers were touring work areas and providing feedback; the RP manager appeared the most effective in this regard. Briefings to workers were comprehensive and appropriately considered radiological and safety considerations. During interviews, managers were aware of departmental concerns and appropriately involved in decision making.

Teamwork between departments appeared somewhat strained.

Workers generally expressed concerns that work groups were not supporting one another, as indicated by the following:

- RP technicians felt that they were assigned responsibility for cleaning up work areas rather than the responsible departments
- A perceived lack of support towards continuing EP training and the necessity of drills/exercises
- A perceived lack of support towards securing vital area doors

This problem was recognized and was being addressed by the plant support departments, as a group (see section 7.2).

7.2 Problem Identification/Problem Resolution

Identification and resolution of individual problems was good.

Managers in this area encouraged workers to identify problems and write CRs. Interviews with workers indicated that concerns were promptly addressed with appropriate feedback to the initiator. CRs for this area reviewed by the team generally had good root cause analyses and good corrective actions. Additionally, worker observations were included in departmental self-assessments. A review of chemistry and RP group self-assessments indicated a good balance between compliance and performance based issues.

Increased cooperation among the plant support departments improved the self-assessment process.

Plant support group managers met periodically to discuss industry concerns, assist in departmental self-assessments, and improve cooperation among other plant departments. For example, the group

reviewed plant support SALP reports from other plants to address common issues. Additionally, self-assessments performed by the chemistry and RP groups referenced industry observations and were discussed at group meetings. The group was also developing actions to increase interdepartmental support and worker knowledge of plant support group management and functions.

The lack of an effective trending program reduced overall self-assessment capability.

Although each department performed some trending, this trending was typically self-contained and informal. This has resulted in concerns being handled on a individual rather than collective basis, increasing the probability of recurrence. For example, corrective actions for several deficiencies regarding high radiation area controls and EP exercises appropriately addressed the individual root causes but were not effective at preventing recurrence. This observation was also identified in a recent station human performance team assessment (PBM 94-0015). The lack of effective trending may impede the identification of broader performance problems.

Inspection recommendations: When conducting IPs 83750, 81700, and 40500, determine if meaningful trending is conducted.

7.3 Quality of EP, RP, FP, Security and Chemistry Programs

Overall, the plant support program quality was good.

Continued good performance was noted in station dose and the number of personnel contaminations, which is reflective of significant improvement in ALARA planning from previous years. Chemistry parameters remained at or below the EPRI recommended guidelines, and source term reduction efforts continued with the practice of early boration. The number of safeguards events continued to decrease and the central (CAS) and secondary (SAS) alarm stations were well maintained. Facilities and supplies for EP and FP were kept in a state of operational readiness and sufficient personnel were trained for EP and fire brigade positions. Although not verified by a regional specialist, station audits indicate the technical aspects of the FP program were good.

Inspection recommendations:

A reduction in the RP core inspection program (IPs 83750, 84750, and 86750) is warranted. A minimum inspection effort consistent with the core program for chemistry, EP and security should be continued.

A routine specialist inspection should be performed to evaluate the technical aspects of the fire protection program.

7.4 Programs and Procedures

Workers were knowledgeable of plant support activities, and procedures were used effectively.

A selective review of procedures did not identify any problems with either technical content or clarity. The inspector observed workers using procedures at the job site and identified no procedural concerns during interviews. Also, workers were knowledgeable of station fire controls, emergency alarms and assembly areas, fitness for duty and escort policies, and ALARA. Generally good radiological work practices were observed during plant tours. Implementing procedures for EP were verified to contain current information for appropriate agencies and individuals.

Contamination control may require further monitoring, as indicated by dress-out practices between the containment and the auxiliary buildings.

Although not considered a "contaminated area," personnel entering the Unit 2 containment were required to don a lab coat, rubber booties, and gloves. Upon exiting containment, personnel were required to remove the gloves and booties but could retain their lab coat. This practice could tend to increase the spread of contamination from containment, however, confirmatory surveys failed to indicate any contamination spread. Because this may be a general station practice, it should be monitored during inspections.

Inspection recommendations: The RP inspection program should monitor contamination area control and the potential for spreading contamination outside of containment.

RESULTS OF FINAL ANALYSIS