November 2, 2000

Mr. Mark Reddemann
Site Vice President
Kewaunee and Point Beach Nuclear Plants
Nuclear Management Company, LLC
6610 Nuclear Road
Two Rivers, WI 54241

SUBJECT: KEWAUNEE - NRC SUPPLEMENTAL INSPECTION REPORT 50-305/2000017(DRS)

Dear Mr. Reddemann:

On September 21, 2000, the NRC completed a follow-up supplemental inspection of your Kewaunee Nuclear Power Plant. The results of this inspection were discussed on September 15, 2000, with Mr. K. Weinhauer, Mr. K. Hoops, and other members of your staff. An additional telephone conference was held on September 21, 2000, with you and other members of your staff to further discuss the inspection results. The enclosed report presents the results of that inspection.

In January 2000, you reported that the reliability of the siren system intended to alert and notify the public near the Kewaunee facility in the event of an emergency was below 90 percent, representing a reduction in safety margin characterized by a yellow performance indicator. The reduced safety margin associated with this performance indicator warranted supplemental NRC inspection and assessment of your actions to improve performance under the degraded Emergency Preparedness Cornerstone of operational reactor safety.

On April 5, 2000, after your staff informed Region III that you had identified and corrected the root causes of the siren system reliability problems, a supplemental inspection was completed pursuant to NRC Inspection Procedure 95002 and was documented in NRC Inspection Report No. 50-305/2000006(DRS). That inspection revealed substantive inadequacies in your staff's evaluation of the root causes of this performance deficiency, the extent of the performance problems, and the corrective actions you were implementing to improve performance. We determined that your evaluation failed to adequately identify deficiencies in management oversight of the siren system, in the implementation and oversight of the siren maintenance program, and in the assessments provided by your quality programs organization. Overall, we concluded that the siren system was not provided adequate management attention.

During a public Regulatory Conference on July 12, 2000, conducted to discuss the results of our April 5, 2000 inspection, we further expressed concern with your initial root cause evaluation and planned corrective actions. We discussed the inadequate management attention and leadership that contributed to the siren performance problems and to your staff's failure to adequately evaluate and correct the problems. Your assessment of the siren system was narrowly focused and did not identify issues that contributed to the siren system performance problems. We also discussed weaknesses in your planned corrective actions and in the oversight provided by your quality programs staff. At that meeting, you informed the NRC staff that you were performing an additional evaluation to determine the root causes of your siren system reliability problems.

Prior to this second supplemental inspection, your staff again notified Region III that your additional evaluation to determine the root causes of the siren reliability problems and necessary corrective actions had been adequately completed. This supplemental inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within those areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

During this follow-up supplemental inspection, we continued to identify deficiencies with your most recently performed evaluation. We concluded that your staff's review was not of adequate depth to identify the root causes which led to the reduced safety margin. Your most recent evaluation identified a number of symptoms of the root causes; however, the evaluation did not clearly identify the actual root causes. After reviewing this evaluation, we concluded that your staff had not identified any substantive insights beyond the issues that we had identified and documented in NRC Inspection Report No. 50-305/2000006(DRS). In addition, your staff had only begun to evaluate the extent of condition of these newly identified problems. Consequently, our inspection was unable to fully review this aspect of your evaluation.

The inadequacies in your staff's root cause evaluation also limited our ability to determine the adequacy of your corrective actions. We acknowledge that the actions your staff has taken focused on the performance of the sirens and has resulted in improved siren reliability. However, your staff had not identified why siren reliability deficiencies were not trended, siren failures were not documented, maintenance records were not maintained, scheduled maintenance was not performed, software changes were not tested, or test acceptance criteria were not consistently applied. We were unable to assess if the corrective actions will address the root causes of these performance problems, in that the root causes had not been clearly identified. We also observed that your program did not provide any formal measure of the effectiveness of these corrective actions to ensure lasting performance improvement.

Because we continue to find substantive weaknesses in your application of your corrective action program to address this issue, we have been unable to conclude that the performance issues that resulted in a yellow PI have been addressed. Therefore, we are issuing a yellow finding that corresponds to the original issues that resulted in a yellow PI. This is due to continued corrective action program implementation deficiencies in the Emergency Preparedness cornerstone. We understand that your staff is performing more comprehensive

and deeper evaluations of the siren performance issue and of your corrective action program implementation deficiencies. Following your completion of these actions, we plan to focus additional NRC supplemental inspection to verify the adequacy of your evaluations and to ensure that appropriate steps are taken and implemented to ensure long-term performance improvements.

Because the emergency preparedness cornerstone continues to be degraded and because of the significant weaknesses with your root cause evaluation and corrective actions for this issue, this letter is also to advise you that we believe a Regulatory Conference with you is necessary. My staff will be contacting you to arrange for a mutually agreeable time and location for a meeting. At that meeting, we plan to focus primarily on actions you are taking to address the corrective action program implementation deficiencies associated with your follow up to the siren system reliability problems.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS)*. *ADAMS is accessible from* the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

J. E. Dyer
Regional Administrator

Docket No. 50-305
License No. DPR-43

Enclosure: Inspection Report 50-305/2000017(DRS)

cc w/encl: K. Weinhauer, Assistant Site Vice President, Kewaunee Plant
B. Burks, P.E., Director, Bureau of Field Operations
Chairman, Wisconsin Public Service Commission
State Liaison Officer

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Docket No. 50-305
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cc w/encl: K. Weinhauer, Assistant Site Vice President, Kewaunee Plant
B. Burks, P.E., Director, Bureau of Field Operations
Chairman, Wisconsin Public Service Commission
State Liaison Officer

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-305
License No:	DPR-43
Report No:	50-305/2000017(DRS)
Licensee:	Nuclear Management Company
Facility:	Kewaunee Nuclear Power Plant
Location:	N 490 Highway 42 Kewaunee, WI 54216
Dates:	September 11 - 21, 2000
Inspector:	Steven K. Orth, Senior Radiation Specialist
Observer:	Ronald V. Schmitt, Radiation Specialist
Approved by:	Gary L. Shear, Chief Plant Support Branch Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 50-305/2000017, on 09/11/2000 - 9/21/2000; Nuclear Management Company; Kewaunee Nuclear Power Plant; Unit 1. Supplemental Inspection - Degraded Cornerstone.

Cornerstone: Emergency Preparedness

Yellow. The licensee's evaluation of the Yellow Alert and Notification (siren) System Performance Indicator (PI) was inadequate. The inspector concluded that the licensee's evaluation was not performed at the depth necessary to identify the root causes of the siren performance problems and, instead, only identified the symptoms of the root causes. Specifically, the inspector identified the following substantive weaknesses in the licensee's evaluation of the siren system performance, which appeared to result from systemic corrective action program deficiencies within this cornerstone:

- The licensee's evaluation was not of sufficient depth to clearly identify the root causes associated with the decline in siren system performance. The licensee's evaluation identified the symptoms and performance problems that contributed to the Yellow PI. However, the licensee's evaluation did not sufficiently evaluate the problems to identify their root causes. Areas that were not adequately evaluated included performance deficiencies in siren failure documentation and trending, conduct of routine maintenance, implementation of periodic testing and conduct of post modification testing.

- Licensee management did not provide well-understood and clear guidance/expectations for performing root cause evaluations. The licensee did not have a procedure implementing a root cause evaluation, and informal guidelines contained in a computerized help utility was not known to the licensee's root cause team. Although the licensee had a formal training program, the inspector noted that three-of-the-five members of the licensee's root cause team had not completed the course.

- The licensee's evaluation of the quality assurance program was narrowly focused and was not critical of its role in failing to identify and correct the siren performance problems. Specifically, the evaluation determined that the audits of the program were performed as required; however, the evaluation team did not question the adequacy of the scope and depth of the audits.

- The licensee did not establish a priority for each of the long-term corrective actions in accordance with the associated significance or risk. Specifically, the licensee assigned each corrective action the same priority, with a scheduled completion date of the end of the calendar year.

- The licensee did not have any formal provisions for measuring the effectiveness of its corrective actions.

- Within the licensee's evaluation, the licensee had not evaluated common causes

or the extent of the condition. At the time of the inspection, the licensee had just initiated a review of the other performance issues to determine the extent of condition.

Due to the corrective action program performance deficiencies within this cornerstone, we have been unable to conclude that the performance issues that resulted in the yellow PI have been addressed. Therefore, we are issuing a yellow finding that corresponds to the original issues that resulted in a yellow PI. Additional inspection effort will be focused on the licensee's further evaluation of the siren reliability root causes and the continuing corrective action program implementation deficiencies identified during this inspection.

Report Details

01 Inspection Scope

This supplemental inspection was performed by the NRC in accordance with Inspection Procedure (IP) 95002 to assess the licensee's evaluation of the Yellow performance indicator associated with its alert and notification system (ANS) in the Kewaunee County portion of the licensee's emergency planning zone. The Yellow performance indicator means that the licensee's sirens did not function as expected during at least 10 percent of the bimonthly test opportunities for the previous 12 months.

In January of 2000, the licensee calculated and reported a Yellow performance indicator for the ANS, which continued to be Yellow through the second quarter of calendar year 2000. On April 4 and 5, 2000, the NRC performed a supplemental inspection to review the ANS Yellow performance indicator and documented the results in NRC Inspection Report No. 50-305/2000006(DRS). Although the licensee identified the extent of the hardware problems, the NRC concluded that the licensee had not performed an adequate evaluation to identify all root causes and other contributing factors. Based on the results of that inspection, the licensee performed an additional evaluation of ANS performance and documented its results in the Kewaunee Assessment Process (KAP) Form No. 00-002354-000.

During this subsequent, supplemental inspection (September 11 - 21, 2000), the NRC evaluated the licensee's expanded root cause evaluation and corrective actions. The NRC conducted this inspection in response to the licensee's poor initial evaluation and corrective actions documented in NRC Inspection Report No. 50-305/2000006(DRS). Since this supplemental inspection was conducted using the requirements of NRC Inspection Procedure (IP) 95002, the following details are organized by the specific inspection requirements of IP 95002 which are noted in italics in the following sections.

02 Evaluation of Inspection Requirements

02.01 *Problem Identification*

a. Determine that the evaluation identifies who (i.e., licensee, self revealing, or NRC) and under what conditions the issue was identified.

b. Determine that the evaluation documents, how long the issue existed, and prior opportunities for identification.

c. Determine that the evaluation documents, the plant specific risk consequences (as applicable), and compliance concerns associated with the issue.

The NRC review of the licensee's identification of this issue was performed during the April 4 - 5, 2000, NRC supplemental inspection and was documented in NRC Inspection Report No. 50-305/2000006(DRS).

During 1998 and 1999 routine biweekly siren testing, the licensee observed a series of individual performance problems with the ANS. In August of 1998, the licensee also

began to lose confidence in the accuracy of the siren performance feedback system and began deploying staff to verify the accuracy of the biweekly test results. The results of these verifications indicated that the siren feedback system was not always reporting the accurate status of siren operations in the fields. During some of these verifications, the licensee found that the feedback system reported successful siren operations when sirens did not fully activate and, conversely, failed to report successful operations when the sirens were fully operational. At the same time, the maintenance staff identified availability issues with replacement parts for the aging system.

In 1999, the licensee concluded that an upgrade to the ANS electronics and software should be installed at each siren location and started to implement plans to have the upgrade completed in the Fall of 1999. As a result of vendor scheduling and component availability issues, the upgrade was delayed until February of 2000. Following the upgrade and the resolution of start-up issues, the ANS demonstrated an improvement in performance. However, the ANS performance was degraded throughout calendar year 1999 and the first calendar quarter of 2000. Therefore, the licensee reported a Yellow performance indicator to the NRC for the system.

On April 4 and 5, 2000, the NRC performed a supplemental inspection to review the ANS Yellow performance indicator and documented the results in NRC Inspection Report No. 50-305/2000006(DRS). Although the licensee identified the primary root cause of the problem, the NRC concluded that the licensee had not performed an adequate evaluation to identify all root causes and other contributing factors. Specifically, the NRC identified the following issues that were not identified by the licensee:

- licensee management oversight of the system was limited,
- quality assurance oversight of the ANS failed to identify degrading performance,
- annual preventive maintenance was not consistently performed,
- the corrective action program was not consistently used to document ANS problems, and
- maintenance procedures and records were deficient.

02.02 *Root Cause and Extent of Condition Evaluation*

a. Determine that the problem was evaluated using a systematic method(s) to identify root cause(s) and contributing cause(s).

The problems with the ANS were not evaluated using a systematic method to determine the root cause and contributing causes. The inspector interviewed members of the team that performed the licensee's evaluation of the ANS performance. The team indicated that it used a combination of root cause analysis techniques to evaluate this issue including barrier, process charting, and events and causal factor analysis. The licensee provided documentation to the inspector demonstrating the use of process charting and of events and causal factor analysis, which were used to derive the

problems associated with the ANS. However, the licensee was unable to produce any documentation to demonstrate to the inspector the use of other systematic root cause evaluation tools. In addition, the inspector found that the licensee's documented evaluation results did not suggest that an adequate, systematic approach outside of an events and causal factors analysis was used.

The inspector observed that the licensee did not have any procedural guidance for performing a root cause analysis. A member of the root cause team provided the inspector a copy of "Root Cause Guidelines," which was contained within the KAP computerized online help utility. However, the team indicated that the existence of the guidelines were not known at the time of the evaluation. Since the licensee did not maintain a formal instruction for performing root cause analysis, the inspector obtained the licensee's training for root cause evaluations. The team leader had completed a training course in 1992 and another team member had taken training in 1989. Subsequent to performing the ANS root cause analysis, the team leader obtained additional root cause training. Had the training been performed prior to the ANS root cause analysis, the team leader stated that she would have produced a different final product. Training documents reviewed did not indicate that the remaining three team members had received any licensee-provided root cause training.

Based on these observations, the inspector concluded that the licensee had not used a systematic method to determine the root causes and contributing causes for the ANS performance problems. As discussed above, licensee management did not provide well-understood and clear expectations for conducting root cause evaluations. Furthermore, members of the assigned root cause evaluation team were not all trained in root cause evaluation techniques. Although the team indicated that some analytical methods were employed, the evaluation did not appear to be conducted in a systematic or methodical manner.

b. Determine that the root cause evaluation was conducted to a level of detail commensurate with the significance of the problem.

The licensee's initial evaluation of ANS performance had identified only hardware issues associated with the system's electronics and feedback software (NRC Inspection Report No. 50-305/2000006(DRS)). Following that review, the licensee performed an expanded root cause evaluation to identify other issues contributing to ANS performance problems. Within this evaluation, the inspector observed that the licensee incorporated the issues identified by the NRC in NRC Inspection Report No. 50-305/2000006(DRS). However, the inspector determined that the licensee's evaluation was not conducted to a sufficient level of detail to identify the root cause(s) of the performance problems. For example, the inspector identified the following:

- The emergency preparedness staff did not adequately use the KAP to document and trend ANS failures. However, the licensee's evaluation did not identify "why" the KAP was not consistently and effectively used (e.g., inadequate management expectations, procedures, training).

- Maintenance records were not well maintained, and siren failures were also not well recorded for purposes of trending or determining failure causes. However,

the licensee's evaluation did not identify "why" these records were not maintained (e.g., inadequate oversight by plant personnel, procedures, management attention, personnel errors).

- The 1999 annual maintenance of the system was not performed as scheduled. However, the licensee did not clearly identify "why" site personnel were not aware of the offsite maintenance group's work on the siren system (e.g., inadequate oversight of non-licensee personnel, procedural controls, training).

- Software changes were not adequately evaluated. In April 1999, the licensee implemented a software change to account for a particular interest group; however, the change was not tested prior to implementation. Following the change, the licensee documented a complete failure of the ANS test. In this case, the licensee's evaluation did not identify "why" this failure occurred (e.g., inadequate testing program, training).

- Success criteria for siren testing was broad and difficult to consistently apply. For example, the licensee did not consistently take credit for field observations or for retests. Although the licensee identified the issue, the licensee did not clearly define "why" the criteria was not appropriate (e.g., personnel error, inadequate procedure/program, training).

The inspector also identified that the licensee had not performed a comprehensive review of its quality assurance department's role in failing to identify and correct the performance of the ANS. Based on the KAP, the licensee concluded that the "... Quality Programs audits and issuance of Quality Assessment Reports (QARs) have been good tools to identify EP [emergency preparedness] program weaknesses..." In particular, the quality assurance staff had performed its required reviews of the emergency preparedness program, which consisted of an interview with offsite officials. The audit record indicated that the officials had not raised concerns with siren performance. Based on the licensee's documented results, the inspector concluded that the root cause team did not adequately challenge the scope of these audits and only affirmed that the quality assurance staff adhered to its audit plan.

After discussing these observations with the licensee, the licensee began to prepare an additional evaluation of the above problems to identify the root cause(s). For example, the licensee indicated that a significant root cause was a lack of management attention. During subsequent discussions with licensee management, the licensee stated that it planned to re-open the KAP form and conduct an additional, formal analysis of the problems, which would be available to the NRC in the future.

c. Determine that the root cause evaluation included a consideration of prior occurrences of the problem and knowledge of prior operating experience.

The licensee compiled a comprehensive chronology of ANS performance. However, the licensee identified that a lack of accurate and complete records hampered this review. For example, the licensee's testing and maintenance records did not consistently provide adequate documentation to determine the cause of certain test failures or the

actions that were taken to resolve the failures. In some cases, these deficiencies limited the licensee's ability to fully evaluate historical performance issues.

d. Determine that the root cause evaluation included consideration of potential common cause(s) and extent of condition of the problem.

At the time of this inspection, the licensee had just begun its review of the potential common causes and extent of condition of the problem. Specifically, the licensee had recently initiated KAP forms to investigate the site's use of the KAP program and the licensee control of maintenance of offsite equipment and of maintenance performed by non-licensee personnel. For example, the inspector observed that the licensee had captured NRC-identified problems with the radiological environmental monitoring program in one of these KAP forms. Since the licensee had only recently started this review, the inspector could not assess the effectiveness of the licensee's actions.

In summary, the inspector concluded that the licensee's root cause evaluation was inadequate. The evaluation was not of sufficient depth to clearly identify the root causes that lead to the ANS performance decline. The inspector also identified that licensee management did not provide well-understood and clear guidance for performing root cause evaluations, which appeared to contribute to the deficiencies identified in the licensee's evaluation. For example, the licensee did not have a procedure for implementing a root cause evaluation, and the licensee's formal root cause training was only received by two-of-the-five members of the licensee's root cause team. In addition, the licensee performed a narrow evaluation of the quality assurance staff's oversight of ANS performance and was not critical of the quality assurance staff's role in failing to identify and correct ANS deficiencies. Finally, the licensee's evaluation did not include an evaluation of common causes, and the licensee had only begun to determine the extent of condition.

02.03 *Corrective Actions*

a. Determine that appropriate corrective action(s) are specified for each root/contributing cause or that there is an evaluation that no actions are necessary.

As discussed in NRC Inspection Report No. 50-305/2000006(DRS), the licensee installed a new electronic feedback system in February 2000 to correct the hardware problems that were identified. The licensee also specified corrective actions for each of the symptoms described in Section 02.02(b):

- Improve emergency preparedness tracking and trending. Reevaluate the emergency preparedness self-assessment process using the KAP and internal tracking systems. Include development of reporting thresholds for siren issues.

- Reevaluate and establish the scope and frequency of the siren system's electronic and electrical/mechanical preventive maintenance with the support of the applicable offsite department.

- Improve the process for making programmatic or software changes to the siren system. The new process will determine when additional testing is necessary to verify the adequacy of the changes.

- More clearly define siren test criteria. The definition should address, but is not limited to results from retests, use of the backup activation system, and use of field observations.

Although these corrective actions appeared to broadly encompass the symptoms identified by the licensee, the inspector could not ensure that the licensee's actions would correct the root cause(s) that led to the identified problems. Based on the above actions, the inspector also could not evaluate if the corrective actions were adequate to prevent additional problems in this area. In addition to these corrective actions, the licensee also had actions planned that the inspector could not directly associate with an identified problem.

b. Determine that the corrective actions have been prioritized with consideration of the risk significance and regulatory compliance.

The licensee's immediate corrective actions were to install the new electronic feedback system (February 2000), to address immediate concerns relating to the activation of the new system, and to reschedule the annual maintenance. The licensee's long-term corrective actions described above were all given the same priority, which was based on the licensee's view that they were of equal importance. However, the licensee could not provide any relationship between the priority assigned to the corrective actions and the risk significance of the actions.

c. Determine that a schedule has been established for implementing and completing the corrective actions.

The licensee assigned each of the corrective actions in Section 02.03(a) with a due date of December 31, 2000. Licensee management indicated that each of the corrective actions were equally important and that the staff could support the assigned date. Although no formal prioritization was evident, the licensee expected the individuals responsible for the corrective actions to informally prioritize their work.

d. Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence.

The inspector identified that neither the KAP nor the licensee's corrective action system contained quantitative or qualitative measures of success for determining the effectiveness of the corrective actions to prevent recurrence. A member of licensee management staff indicated that he was personally monitoring certain corrective actions and that he expected the licensee's quality assurance organization to also perform an effectiveness review. However, the site quality assurance manager stated that this type of review was not a standard aspect of their audit plan, that they had not been requested by the site to review the corrective actions, and that, furthermore, they had not been provided any measures to determine the effectiveness of the actions. In

addition, the inspector identified that the licensee had also eliminated all independent verifications of the ANS feedback system and relied solely on the installed hardware and software. Consequently, the inspector concluded that the licensee did not have adequate provisions for validating the effectiveness of its corrective actions.

In conclusion, the inspector identified weaknesses in the licensee's long-term corrective actions. The corrective actions appeared to broadly encompass the symptoms identified by the licensee. However, the inspector was unable to assess if the corrective actions would address the root causes of the performance problems, as the root causes had not been clearly identified by the licensee. In addition, the inspector did not observe a relationship between the priorities assigned to the corrective actions and their risk significance. The licensee also did not have any formal provisions for measuring the effectiveness of the planned corrective actions.

02.04 *Independent Assessment of Extent of Condition*

Since the licensee had not completed its review of the extent of the issues, the inspector was not able to evaluate the licensee's performance in this area.

03 Exit Meeting Summary

On September 15, 2000, the inspector presented the initial inspection results to the Mr. K. Weinhauer and other members of the Kewaunee staff. A subsequent telephone conference was conducted on September 21, 2000, with Mr. Mark Reddemann and other members of the licensee's staff to discuss the final results of the inspection. The licensee acknowledged the findings presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Wisconsin Public Service Corporation

B. Bartelme, Coordinator, Emergency Preparedness
D. Cole, Manager, Site Assessments
K. Evers, Manager, Nuclear Support Services
G. Harrington, Plant Licensing Supervisor
L. Hayworth, Process Leader, Quality Programs
K. Hoops, Plant Manager, Kewaunee Plant
B. Koehler, Manager, Quality Programs
M. Reddemann, Site Vice President
R. Repshas, Manager, Site Services
T. Schneider, Quality Programs
D. Seebart, Process Leader, Emergency Preparedness
T. Webb, Nuclear Licensing Director
K. Weinhauer, General Manager, Kewaunee Plant

LIST OF DOCUMENTS REVIEWED

Audit Instruction AI 3.2, "Emergency Preparedness Program," dated December 12, 1997

Kewaunee Assessment Process Forms

Work Order No. 00-002354-00 and associated attachments
Work Order No. 00-002354-01
Work Order No. 00-002354-02
Work Order No. 00-002354-03
Work Order No. 00-002354-04
Work Order No. 00-002354-05
Work Order No. 00-002354-06
Work Order No. 00-003048-00
Work Order No. 00-003127-00
Work Order No. 00-003128-00

GNP-11.08.01 Revision C, "Kewaunee Assessment Process (KAP)," dated April 20, 2000
NAD-11.08 Revision D, "Kewaunee Assessment Process (KAP)," dated April 20, 2000
Plant Operations Review Committee Meeting Minutes, Meeting Number 00-0166, conducted on August 21, 2000
"Root Cause Guidelines," obtained from Kewaunee Assessment Process Online HELP