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EA-02-031

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

SUBJECT: POINT BEACH NUCLEAR PLANT FINAL SIGNIFICANCE  
DETERMINATION FOR A RED FINDING AND NOTICE OF VIOLATION  
NRC INSPECTION REPORT NO. 50-266/01-17(DRS); 50-301/01-17(DRS)

Dear Mr. Warner:

The purpose of this letter is to provide you with the final results of our review of the apparent violations and preliminary significance determination of the finding identified in the subject inspection report. The finding and violations involved the potential common mode failure of the auxiliary feedwater (AFW) pumps during specific accident scenarios that you discovered during your efforts to update your probabilistic risk assessment (PRA) of the Point Beach Nuclear Plant. The inspection report described apparent violations of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for inadequate procedures and 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for seven instances where you should have identified and corrected the vulnerability. The inspection finding was assessed using the significance determination process and was preliminarily characterized as Red, i.e., a finding of high importance to safety that could result in increased NRC inspection and other NRC action.

At your request, a Regulatory Conference was held on April 29, 2002, to further discuss your views on the apparent violations and preliminary risk significance determination. A copy of the handouts used at this conference are enclosed. During the conference, you provided your assessment of the significance of the finding and detailed your staff's corrective actions, including the root cause evaluations. You agreed with the NRC's preliminary assessment of the risk significance associated with the finding and the apparent violation of 10 CFR Part 50, Appendix B, Criterion V; however, you disagreed with the violation of 10 CFR Part 50, Appendix B, Criterion XVI. You argued that the proposed instances of inadequate corrective actions either did not specifically relate to the root cause of the problem or that it was not reasonable to expect appropriate corrective actions because the PRA techniques used to discover the problems were not used as a formal tool until 1999. Additionally, you proposed that the finding be treated as an old design issue as specified in NRC Inspection Manual Chapter (MC) 0305, "Operating Reactor Assessment Program," and that there was no need for additional inspection.

We recognize that your staff identified the issue and took prompt corrective actions to revise procedures and train operators to address the immediate safety concerns associated with the issue. Additionally, your staff installed backup pneumatic supplies for the recirculation valves to

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improve the safety of the AFW system design. After considering the information developed during the inspection and the information your staff provided at the conference, we have concluded that a violation of 10 CFR Part 50, Appendix B, Criterion XVI, is appropriate for two of the originally proposed seven examples. The root cause of the finding was your failure to recognize that the AFW system minimum flow recirculation valves must be able to open to respond to the full spectrum of event scenarios. The valves must close during certain scenarios to allow full flow to the steam generators and open in other scenarios to allow adequate recirculating flow to protect the running AFW pumps. Until recently, your procedures and system design only considered operation in the closed safety function for event response. The specific examples included in the violation occurred in 1997 at a time when your design bases document for the AFW system identified both open and closed safety functions as appropriate for the recirculation valves. In March 1997 you identified that loss of instrument air to the AFW flow control valves could cause system failure and reported this in Licensee Event Report 97-014-00. An appropriate extent of condition review should have identified the same vulnerability for the recirculation valves given their stated open safety function identified in the AFW system design bases document. Similarly, in October 1997, Condition Report 97-3363 identified a discrepancy with your inservice test program and the design bases document concerning the open safety function of the recirculation valves. An inadequate evaluation of this report resulted in revising the design bases document to delete the open safety function. We also concluded that the PRA techniques you utilized in 2001 to identify this issue were a valuable engineering tool to assess its significance, but was not required to identify this AFW system vulnerability.

Although not cited, your response to Generic Letter 88-14, "Instrument Air Supply Problems Affecting Safety Related Equipment," could also have identified and addressed the AFW system vulnerability associated with loss of instrument air. Generic Letter 88-14 requested that licensees verify that emergency procedures and training were adequate to ensure that safety-related equipment would function as intended on a loss of instrument air and to verify that safety-related components will perform as expected on a loss of the instrument air system, including that air-operated component failure positions were correct for assuring required safety functions. This generic correspondence should have directed your attention to this very vulnerability with the air-operated AFW system recirculation valves.

As such, the NRC has determined that the potential common mode failure of the Point Beach AFW pumps is a violation of 10 CFR Part 50, Appendix B, Criteria V and XVI, as cited in the enclosed Notice. The circumstances surrounding the violation are described in detail in the subject inspection report. In accordance with the NRC Enforcement Policy, NUREG-1600, the Notice of Violation is considered escalated enforcement action because it is associated with a Red finding. You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response.

Based on the information contained in the subject inspection report and obtained during the regulatory conference, the NRC has concluded that the finding is appropriately characterized as Red. A finding characterized as Red is an issue of high importance to safety that normally could result in substantially increased NRC inspection and other NRC action. You have 30 calendar days from the date of this letter to appeal the staff's determination of significance for the identified Red Finding. Such appeals will be considered to have merit only if they meet the criteria given in MC 0609, Attachment 2. We also considered your proposal that this issue be treated as an old design issue as specified in MC 0305. We recognize that although opportunities existed to identify the issue, they occurred several years ago and are not necessarily indicative of current performance. However, we believe that additional information is needed for us to complete our evaluation of whether or not it is appropriate to treat this issue

as an old design issue. Specifically, a follow-up inspection will be conducted to evaluate the corrective actions your staff has taken, or that will be taken, to prevent recurrence. We will inform you, by separate correspondence, of our plans for this inspection. Following that inspection, we will complete our evaluation of whether or not it is appropriate to treat the issue as an old design issue and inform you of our decision and what actions (including which appropriate supplemental inspection, if any) are warranted based on this decision.

If we determine that treatment as an old design issue is appropriate, then, in accordance with Section 6.06.a. of MC 0305, the NRC will not aggregate this finding in the Action Matrix for the purpose of determining the appropriate level of agency response. This means that the issue will be considered Red and posted on the NRC's Web site for a period of 4 quarters. However, Point Beach will not be placed in the Multiple/Repetitive Degraded Cornerstone Column of the Action Matrix nor will the specified actions associated with this column be taken as would normally occur for a Red finding. We would, however, plan to conduct some limited additional inspection. Such inspection effort would be limited to an evaluation of your proposed corrective actions and your assessment that similar issues would be appropriately addressed in your corrective action program. Additionally, we would review your plans to continue the initiative to update the Point Beach Nuclear Plant Probabilistic Risk Assessment so that other potential risk significant issues may be identified if they exist. The purpose of this approach is to place a premium on licensees initiating efforts to identify and correct safety-significant issues that are not likely to be identified by routine efforts before degraded safety systems are called upon to work. However, if treatment as an old design issue is not determined to be appropriate, then the issue will be considered Red and posted on the NRC's Web site for a period of 4 quarters, Point Beach will be placed in the Multiple/Repetitive Degraded Cornerstone Column of the Action Matrix, and the NRC will take the appropriate actions in accordance with the guidance provided in MC 0305.

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

Sincerely,

J. E. Dyer  
Regional Administrator

Docket Nos. 50-266; 50-301  
License Nos. DPR-24; DPR-27

Enclosures:   1. Notice of Violation  
                  2. NRC April 29, 2002 Regulatory Conference Slides  
                  3. NMC April 29, 2002 Regulatory Conference Slides  
                  4. NMC Photograph of Recirculation Valve  
                  5. NMC April 29, 2002 Regulatory Conference Timeline

cc w/encls:   R. Grigg, President and Chief  
                  Operating Officer, WEPCo

R. Anderson, Executive Vice President  
and Chief Nuclear Officer  
T. Webb, Licensing Manager  
D. Weaver, Nuclear Asset Manager  
T. Taylor, Plant Manager  
A. Cayia, Site Director  
J. O'Neill, Jr., Shaw, Pittman,  
Potts & Trowbridge  
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J. Dixon-Herrity, OE

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S. Collins, NRR

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## NOTICE OF VIOLATION

Nuclear Management Company, LLC.  
Point Beach Nuclear Plant

Docket Nos. 50-266; 50-301  
License Nos. DPR-24; DPR-27  
EA-02-031

During an NRC inspection conducted on December 3, 2001, through February 28, 2002, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violation is listed below:

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective actions taken to preclude repetition.

Contrary to the above, as of November 29, 2001, activities affecting quality were not prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances. Specifically, procedures EOP-0.1 Unit 1, "Reactor Trip Response," Revision 24, and EOP-0.1 Unit 2, "Reactor Trip Response," Revision 23, did not provide adequate operator instructions to verify that the auxiliary feedwater (AFW) minimum flow recirculation valves were open while controlling AFW flow upon low instrument air header pressure. Low header pressure would cause the AFW minimum flow recirculation valves to fail closed, a significant condition adverse to quality which resulted in potential failure of the AFW pumps as a result of blocking the discharge flow path. From at least 1997 to 2001, the licensee failed to promptly identify and correct a condition adverse to quality. Prior opportunities to identify this failure mode included:

- In October 1997, the safety function of the minimum flow recirculation valves was considered in response to Condition Report 97-3363.
- In March 1997, the licensee identified a failure mode of the AFW system due to the loss of instrument air as discussed in Licensee Event Report 97-14-00.

This violation is associated with a Red SDP finding.

Pursuant to the provisions of 10 CFR 2.201, Nuclear Management Company, LLC., is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region III, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made 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), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html> (the Public Electronic Reading Room). If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this \_\_\_\_ day of July 2002