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Kewaunee / Point Beach Nuclear
Operated by Nuclear Management Company, LLC

NRC 2002-0061

10 CFR 2.201

July 15, 2002

Document Control Desk
U. S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, DC 20555

Ladies/Gentlemen:

Dockets 50-266 And 50-301
NRC Inspection Report Nos. 50-266/02-03; 50-301/02-03 and
50-266/02-05; 50-301/02-05
Reply To A Notice Of Violation
Point Beach Nuclear Plant, Unit 2

References: 1. Letter from GE Grant (NRC) to ME Warner (NMC) dated June 13, 2002
2. Letter from TH Taylor (NMC) to Document Control Desk dated April 18, 2002
(LER 301/2002-001-00)

In Reference 1 the Nuclear Regulatory Commission (NRC) forwarded the final results of its significance determination and Notice of Violation (NOV) for the finding identified in the subject inspection reports. The NRC cited a violation of Criterion XVI, "Corrective Action," of 10 CFR 50 Appendix B at Unit 2 of the Point Beach Nuclear Plant. The basis for this violation was our failure to take prompt corrective action when confronted with decreasing fluid level in a Safety Injection (SI) system accumulator and knowledge of the susceptibility of the SI pumps to gas binding. Details of the SI pump failure and resulting reactor shutdown, which lead to this violation finding, were provided in Reference 2. This finding has been characterized as white using the significance determination process.

We have reviewed the Notice of Violation and pursuant to the provisions of 10 CFR 2.201, have prepared a written response to the violation as requested by your letter. Our written response to the violation is included as an attachment to this letter.

If there are questions or additional information regarding this response is needed, please contact me.

Sincerely,


Tom Taylor
Plant Manager

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Attachment

cc: NRC Regional Administrator
NRC Resident Inspector
NRC Project Manager
PSCW

**Attachment
To the Letter**

From:

Tom Taylor (NMC)

To:

US NRC Document Control Desk

Dated:

July 15, 2002

**Reply To A Notice Of Violation
NRC Inspection Report Nos. 50-266/02-03; 50-301/02-03
And 50-266/02-05; 50-301/02-05
Point Beach Nuclear Plant Unit 2**

NRC VIOLATION

During NRC inspections conducted from January 22 through March 31, 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:

Criterion XVI, "Corrective Action," of 10 CFR Part 50 Appendix B, requires, in part, that conditions adverse to quality be 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, between April 2000 and February 20, 2002, the licensee failed to promptly identify and correct a significant condition adverse to quality regarding leakage from the 2T-34A safety injection accumulator. Nitrogen that leaked from the accumulator caused gas binding and subsequent failure of the 2P-15B safety injection pump on February 20, 2002. Specifically:

- a. In April 2000, the licensee completed a review of Information Notice 88-023, Supplement 5, "Potential for Gas Binding of High-Pressure Safety Injection Pumps During a Loss-of-Coolant-Accident," and identified that the Point Beach safety injection systems were susceptible to gas binding in the event of leakage from the safety injection accumulators through multiple check valves and/or motor-operated valves. However, corrective actions were not promptly taken
- b. On February 12, 2001, (Condition Report 01-0454), and on January 15, 2002, (Action Request 1862), licensed control room operators identified decreasing trends in 2T-34A safety injection accumulator level. However, the cause of the condition was not determined and corrective actions were not taken to preclude repetition.

This violation is associated with a White SDP finding.

NMC RESPONSE

We concur this is a violation of NRC requirements and that the finding has been properly characterized through the significance determination process (SDP) as white, an issue with low to moderate increased importance to safety.

Reason For The Violation:

Organizational weaknesses in a number of areas and deficiencies in the station's industry and in-house operating experience programs contributed to this violation. The following factors contributed to this violation:

- *Tolerance of Equipment/Material Deficiencies:* Frequent refilling of the SI accumulator was not identified on either the Operations work around or priority issues lists. A history of SI accumulator leakage at PBNP contributed to an acceptance of the condition as routine and expected.
- *Inadequate Questioning Attitude:* Station personnel did not adequately review or question all aspects of the SI accumulator leakage issue. Personnel raising questions did not adequately advocate their positions, or deferred to the judgment of others. Personnel focused on most likely causes without adequately validating/challenging assumptions or conclusions.
- *Deficiencies in Operating Experience Program:* The failure of a SI pump and the resultant Technical Specification shutdown could have been prevented had the station effectively applied industry experience.
- *Ineffective Operational Decision-Making:* Station personnel did not use a systematic, rigorous approach to evaluate and respond to the persistent SI accumulator leakage, a degrading plant condition. Although the plant condition was identified, and the requisite knowledge and expertise existed within the organization, the necessary elements were not assembled and applied to effectively and completely evaluate the condition. Critical decisions were made without sufficient information and expertise. The potential consequence of this operational challenge was not promptly and thoroughly evaluated.

Corrective Actions Taken:

Completed corrective actions included:

- A protocol for venting the SI pumps and the system piping was implemented. During the Unit 2 refueling outage in April 2002, the ECCS valves associated with the SI accumulators were repaired to minimize accumulator leakage. The Unit 2 ECCS was also modified to install high point vents to facilitate future system venting.
- A review of open Operating Experience (OE) was completed to determine if other significant OE items were not being evaluated in a timely manner.
- Industry OE program performance indicators have been established and implemented to provide a management control system for the process.
- Operations and Engineering management have held "lesson learned" briefings with their respective personnel. Operations emphasized questioning attitude, necessity for thorough understanding of the reasons for equipment abnormalities, and intolerance for equipment deficiencies. Engineering emphasized individual accountability and intolerance for, and ownership of, equipment problems.

- NMC has developed a Human Performance Improvement plan for the Point Beach Nuclear Plant to correct the behaviors that lead to this event.

Corrective Action To Be Taken:

Corrective actions to be taken include:

- The failure of the SI pump event and the lesson learned from that event will be incorporated into a case study to be discussed with appropriate station personnel. This study will focus on developing the behaviors and reinforcing the standards necessary for operationally focused organizations. The case study will be developed by August 2002 with training provided in the Fall 2002.
- The station programs for tracking, evaluating, and correcting equipment deficiencies will be improved. These improvements will include operator work arounds, trouble shooting, operability determinations and the work request process. These program improvements will be completed by the end of October 2002.
- An effectiveness review of the completed and proposed corrective actions for the root cause will be conducted. The effectiveness review will be completed by the end of December 2002.
- A team will be established by the end of July 2002 to improve methods used to determine the significance of corrective action requests during the management screening process. These improvements will be implemented by September 2002.

Date Of Full Compliance:

Based on the repair of the SI pump, the implementation of venting procedures for the SI system, and the review of open external operating experience reports, we conclude that the PBNP is now in compliance with the corrective action Criterion XVI.