

January 31, 2007

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U. S. Nuclear Regulatory Commission  
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Washington, DC 20555

Point Beach Nuclear Plant, Units 1 and 2  
Dockets 50-266 and 50-301  
License Nos. DPR-24 and DPR-27

Response to Request for Additional Information Regarding Resolution of  
Generic Letter 2006-02, "Grid Reliability and the Impact on Plant Risk and the  
Operability of Offsite Power"

- References
- 1) Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2006-02, "Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power", dated February 1, 2006, Accession Number ML060180352.
  - 2) Nuclear Management Company, LLC (NMC) letter L-HU-06-030, "Response to Generic Letter 2006-02, 'Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power,'" dated July 21, 2006, Accession Number ML062050349.
  - 3) NRC letter, "Request for Additional Information Regarding Resolution of Generic Letter (GL) 2006-02, Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power (TAC Nos. MD0947-MD1050), dated December 5, 2006, Accession Number ML063380300.
  - 4) NRC letter, "Revised Response Date for Request for Additional Information Regarding Resolution of Generic Letter (GL) 2006-02, Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power" (TAC Nos. MD0947 through MD1050), dated December 13, 2006, Accession Number ML063460440.

In Reference 1, the NRC requested that specific information be provided for each nuclear plant. Reference 2 provided the NMC response to the requested information for the Point Beach Nuclear Plant (PBNP). In Reference 3, the NRC transmitted six requests for additional information (RAIs) for resolution of GL 2006-02 and a matrix listing the applicable RAI questions for each specific plant. Reference 4 requested that the RAI responses be provided to the NRC by January 31, 2007.

Enclosure 1 provides the NMC responses to RAI 1 and RAI 3 for PBNP as requested by the NRC in Reference 3. RAI 3 requests information about analyses, procedures and activities concerning grid operation not controlled by NMC. NMC's response to RAI 3 is

based, in part, upon information provided by the American Transmission Company, the operator of the grid to which PBNP is connected, and the Midwest Independent System Operator, the grid reliability coordinator. NMC has verified their information to the maximum extent practical.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on January 31, 2007.



Dennis L. Koehl  
Site Vice-President, Point Beach Nuclear Plant  
Nuclear Management Company, LLC

Enclosure (1)

cc: Administrator, Region III, USNRC  
Project Manager, Point Beach, USNRC  
Resident Inspector, Point Beach, USNRC

**Enclosure 1**  
**Response to Request for Additional Information**  
**Regarding Resolution of Generic Letter 2006-02**  
**Point Beach Nuclear Plant, Units 1 and 2**

**NRC Request for Additional Information (RAI) 1,**  
**Switchyard Minimum Voltage**

*In response to question 1(g) you did not identify specific minimum switchyard voltage limits (kV) that you supplied to the local transmission entity. Please, provide the following information:*

- a. What is the specific minimum acceptable switchyard voltage included in your protocol agreement with your grid operator (GO) and what was the basis for this value?*
- b. How is this value related to your technical specification degraded voltage relay setpoints?*

**Nuclear Management Company (NMC) Response**

The minimum acceptable switchyard voltage provided to American Transmission Company (ATC), the operator of the transmission system to which the Point Beach Nuclear Plant (PBNP) is connected, is 348.5 kV. The minimum 345 kV steady-state system voltage was determined to ensure the degraded voltage relays at the 4.16 kV buses will recover to a voltage greater than the pickup setting prior to the relay timing out to reduce the probability of safety-related buses separating from the preferred offsite power source during short term undervoltage transients (e.g., motor starting) after the relays went below their dropout setting.

The Technical Specification degraded voltage relay setpoints are related to the dropout settings of the relays. The degraded voltage relay dropout setpoint is established to ensure that the 4.16 kV safeguards buses are separated from offsite power prior to unsatisfactory operation of equipment (e.g., damage) or trip of their overcurrent device, which would prevent the equipment from being re-sequenced onto the emergency diesel generators. Therefore, the degraded voltage relays will dropout once the minimum voltage on the 4.16 kV bus is reached initiating separation from offsite power after the associated time delay has timed out. However, the minimum acceptable switchyard voltage was determined based on the degraded voltage relays pickup settings. The degraded voltage relay pickup setpoint (e.g., reset) is established to ensure that there is minimum differential between the dropout and pickup setpoints to reduce the probability of the safeguards buses separating from the preferred offsite power source during short-term undervoltage transients (e.g., motor starting) that recover to a voltage above the pickup setting. Therefore, the minimum acceptable switchyard voltage has been established to maintain PBNP 4.16 kV safeguards buses

greater than the safety-related equipment's minimum required voltage to prevent equipment damage and minimize the separation of preferred offsite power source during short term undervoltage transients (e.g. motor starting) by establishing a minimum acceptable switchyard voltage greater than a voltage equivalent to the degraded voltage relays dropout and pickup setting.

**NRC RAI 3, Verification of Real Time Contingency Analysis (RTCA),  
Predicted Post-Trip Voltage**

*Your response to question 2(g) indicates that you have not verified by procedure the voltages predicted by the online grid analysis tool (software program) with actual real plant trip voltage values. It is important that the programs used for predicting post-trip voltage be verified to be reasonably accurate and conservative.*

- a. *What is the range of accuracy of your GO's (grid operator's) contingency analysis program?*
- b. *Why are you confident that the post-trip voltages calculated by the GO's contingency analysis program (that you are using to determine operability of the offsite power system) are reasonably accurate and conservative?*
- c. *What is your standard of acceptance?*

**NMC Response**

ATC, the PBNP GO, does not determine the range of accuracy for its RTCA program. The RTCA is a tool within the purview of the GO. The GO's confidence in the RTCA tool is based on many years of operating experience using this application, and comparing real-time results of many scheduled and forced outages across the GO's system. There have been no instances where the post-trip voltages violated pre-defined limits which were not already identified by the RTCA program. In addition, the regional Independent System Operator (ISO) (Midwest ISO) runs an independent RTCA. The GO and ISO periodically compare the results of their analyses to further assure reasonable results. Because many of the Midwest ISO (MISO) transmission owning member companies have similar RTCA programs, there are many opportunities to compare the results. This results in a high confidence that the RTCA results are accurate. However, if the resultant voltages are outside of the criteria when they are predicted to be within the criteria, both the GO and MISO would initiate an investigation. Therefore, based on the GO's continuing use of the program to operate the transmission system and their operating experience, NMC is confident in the post-trip voltages calculated by the GO's RTCA.

NMC acceptance for PBNP is based on the GO's acceptance. The GO operates the transmission system within the NERC reliability standards and the We-Energies/American Transmission Company (ATC) Generator-Transmission

## Enclosure 1

Interconnection Agreement. Operation by ATC within the standards and the agreement provides confidence the GO will operate the transmission system within the voltage requirements agreed upon between NMC and the GO. Therefore, based on the GO's continuing use of the program to operate the transmission system and their operating experience, NMC is confident in the accuracy of the RTCA program utilized by the GO.