July 6, 2005

Mr. Christopher M. Crane, President
and Chief Executive Officer
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, Illinois 60555

SUBJECT: CLINTON POWER STATION, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION RE: TECHNICAL SPECIFICATION CHANGE FOR LONG-TERM STABILITY SOLUTION - OSCILLATION POWER RANGE MONITOR INSTRUMENTATION (TAC NO. MC6551)

Dear Mr. Crane:

By letter dated April 1, 2005, AmerGen Energy Company, LLC, submitted an application to amend the Technical Specifications (TSs) to add TS 3.3.1.3, "Oscillation Power Range Monitor (OPRM) Instrumentation", and to revise both TS 3.4.1, "Recirculation Loops Operating," and TS 5.6.5, "Core Operating Limits Report (COLR)."

Based on our review of your submittal, the U.S. Nuclear Regulatory Commission staff finds that a response to the enclosed request for additional information is needed before we can complete the review. This request for additional information was previously forwarded to your staff; and on July 5, 2005, it was discussed with them. Your staff agreed that a response would be provided by August 15, 2005.

If you have any comments or questions, please contact the Clinton Project Manager, Kahtan Jabbour, at (301) 415-1496.

Sincerely,

/RA/

Kahtan N. Jabbour, Senior Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-461

Enclosure: As stated

cc: See next page

Clinton Power Station, Unit 1

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Kahtan N. Jabbour, Senior Project Manager, Section 2
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Division of Licensing Project Management
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Enclosure: As stated

cc: See next page

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REQUEST FOR ADDITIONAL INFORMATION

OSCILLATION POWER RANGE MONITOR INSTRUMENTATION

AMERGEN ENERGY COMPANY, LLC

CLINTON POWER STATION, UNIT 1

DOCKET NO. 50-461

1. The NRC-approved topical report NEDO-32465-A, "BWR Owners' Group Reactor Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications," dated August 1996, is a generic approval for the delta critical power ratio/initial critical power ratio vs. oscillation magnitude (DIVOM) correlation. Please provide a detailed description of the methodology for calculating the plant-specific DIVOM correlation and identify the NRC-approved methodologies used to calculate the Oscillation Power Range Monitor (OPRM) setpoints in Technical Specification (TS) 3.3.1.3.

2. Please provide a detailed description of the implementation status of the OPRM system including the detailed procedures to finalize system calibration and trip setpoints based on the approach discussed in NEDO-32465-A, or an approach utilizing the plant-specific data. Please provide justification why the OPRM system which was installed in the spring of 1999 is not currently armed.

3. Please provide detailed results of the system tests that support the accuracy and operability of the current OPRM instrumentation. Specifically, please include the available data obtained during shutdowns and subsequent startups from outages since the OPRM system was installed in 1999.

4. According to the BWROG [Boiling Water Reactor Owners Group] letter, BWROG-03048 dated September 30, 2003, "Utility Commitment to NRC for OPRM Operability at Option III Plants," plant-specific DIVOM curve is recommended. Please identify any plant-specific differences from the generic values specified in NEDO-32465-A, such as the period based detection algorithm (PBDA) confirmation setpoints in Table 3-1, PBDA trip setpoints in Table 3-2, and generic DIVOM curve slope. Also, provide plant-specific values for OPRM scram setpoints and the DIVOM correlation for the next cycle.

5. Please provide a detailed description of the procedure used to generate the OPRM's Period Based Algorithm Allowable Values and Confirmation Counts for future cycles. Please discuss the rationale used to relocate the allowable values to the core operating limits report (COLR).

6. Surveillance Requirement (SR) 3.3.1.3.2 states that the setpoints for the trip function shall be as specified in the COLR. Please identify the specific setpoints and provide justification why "LCO 3.3.1.3 Four channels of the OPRM instrumentation shall be Operable" does not include the phrase "within the limits as specified in the COLR."

Enclosure

7. Please provide a detailed description of the alternate method to detect and suppress thermal-hydraulic instability oscillation stated in TS LCO 3.3.1.3, Actions A.3 and B.1. Please include the calculation methodology used to define the regions of exclusion, exit, and controlled entry on the power-to-flow map.

8. Please discuss the rationale for the different thermal power values stated in the applicability section of LCO 3.3.1.3 (i.e., 21.6 percent) and in SR 3.3.1.3.4 (i.e., 25 percent). Also, please provide the technical basis for the completion time of 120 days in LCO 3.3.1.3 B.2. The staff notes that related information is discussed in CENPD-400-P-A, Rev. 1, "Generic Topical Report for the ABB Option III Oscillation Power Range Monitor (OPRM)," dated May 1995.

9. Since the OPRM system was in test mode before the trip output will be activated, please describe the lessons learned during the testing period of the system. Please include any changes that were necessary in order to avoid any spurious scrams at Clinton Power Station, Unit 1, and whether the deviations from the NRC approved methodology, if any, were conservative.

10. Page 9 of Attachment 1 states that there are no allowable values associated with the OPRM upscale trip function. Please discuss how the operability of the OPRM upscale function is determined in the absence of the allowable values. If some other value has been used by the procedure, then please discuss how this value meets the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36(c)(1)(ii)(A).

11. In order to ensure that the proposed OPRM trip will perform its intended design function, the equipment should be qualified for all environmental conditions where it is installed, as required by General Design Criterion 4, Appendix A to 10 CFR Part 50. Please confirm that the OPRM equipment at Clinton has been qualified for electromagnetic interference (EMI) and radio frequency interference (RFI) based on either the worst case EMI/RFI levels at its installed location or using the generic levels identified in the Electric Power Research Institute's Report, TR-102323, "Guidelines for Electromagnetic Interference Testing in Power Plants," and Regulatory Guide 1.180, "Guidelines for Evaluating Electromagnetic and Radio Frequency Interference in Safety-Related Instrumentation and Control Systems," dated October 2003.

12. Page 8 of Attachment 1 states that the calibration of the Low Power Range Monitors (LPRMs) is included in SR 3.3.1.1.8 for the Average Power Range Monitors (APRMs). Therefore, it is not listed in the SR for OPRM. However, listing the SR in OPRM assures that the inoperability of LPRMs will be taken into account for OPRM also, instead of relying on the technician to take appropriate corrective actions. The improved TSs were developed on this basis and should be followed. Please discuss how you intend to address this concern.