

10 CFR 50.90

RS-06-041

March 16, 2006

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Clinton Power Station  
Facility Operating License No. NPF-62  
NRC Docket No. 50-461

**Subject:** Oscillation Power Range Monitor Instrumentation Plant Specific Scram Setpoints and DIVOM Correlation

- References:**
- (1) Letter from Keith R. Jury (AmerGen Energy Company, LLC), to U. S. NRC, "Request for Amendment to Appendix A, Technical Specifications for the Oscillation Power Range Monitor Instrumentation," dated April 1, 2005
  - (2) Letter from Kahtan N. Jabbour (U. S. NRC) to Christopher M. Crane, (AmerGen Energy Company, LLC), "Clinton Power Station, Unit 1 – Issuance of Amendment for Addition of Oscillation Power Range Monitor," dated January 26, 2006

In Reference 1, AmerGen Energy Company, LLC (AmerGen), requested a change to incorporate the Oscillation Power Range Monitor (OPRM) instrumentation into the Technical Specifications (TS), Appendix A, of Facility Operating License No. NPF-62 for Clinton Power Station (CPS), Unit 1. The NRC subsequently approved the Reference 1 request in Reference 2.

As part of the NRC review of Reference 1, the NRC requested AmerGen provide plant specific values for the OPRM scram setpoints and the Delta Critical Power Ratio/Initial Critical Power Ratio Versus Oscillation Magnitude (DIVOM) correlation for the next cycle, when they became available. The requested values are provided below.

A CPS specific analysis was performed to determine a DIVOM curve that is applicable to the upcoming CPS operating cycle 11, during which the OPRM trip function will be activated. The DIVOM analysis is performed using NRC approved methodologies and is based on limiting conditions during the operating cycle. The stability analysis was performed for the power/flow

state point, corresponding to a post two-pump trip condition at 32% rated core flow along the licensed upper boundary of the power flow map. The limiting exposure condition was identified and utilized to bound the entire operating cycle. A limiting DIVOM curve for CPS, Cycle 11, was developed. The limiting DIVOM curve is bounded by a slope of 0.39. However, a more conservative DIVOM slope of 0.45 was selected for application in the OPRM Trip Setpoint calculations.

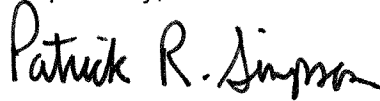
A calculation of the OPRM Amplitude Trip Setpoints ( $Sp$ ), and associated OPRM Confirmation Count Trip Setpoints ( $Np$ ), was performed. The OPRM trip setpoints are a function of the calculated DIVOM curve and the cycle specific Operating Limit Minimum Critical Power Ratio (OLMCPR) and Safety Limit Minimum Critical Power Ratio (SLMCPR).

Based on the Cycle 11 cycle specific parameters, and the conservative DIVOM slope of 0.45, the required OPRM Amplitude Trip Setpoint ( $Sp$ ) was determined to be 1.13. The associated OPRM Confirmation Count Trip Setpoint ( $Np$ ) was determined to be 15.

There are no regulatory commitments contained within this letter.

If you have any questions or require additional information, please contact David Gullott at 630 657-2819.

Respectfully,

A handwritten signature in black ink that reads "Patrick R. Simpson". The signature is written in a cursive style with a large initial "P".

Patrick R. Simpson  
Manager - Licensing