

RS-07-098

July 2, 2007

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

Quad Cities Nuclear Power Station, Unit 1  
Renewed Facility Operating License No. DPR-29  
NRC Docket No. 50-254

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

- References:
- (1) Letter from Patrick R. Simpson (Exelon Generation Company, LLC), to U. S. NRC, "Request for License Amendment Regarding Transition to Westinghouse Fuel," dated June 15, 2005
  - (2) Letter from Maitri Banerjee (U. S. NRC) to Christopher M. Crane, (Exelon Generation Company, LLC), "Dresden Nuclear Power Station, Units 2 and 3, and Quad Cities Nuclear Power Station, Units 1 and 2 – Issuance of Amendments re: Transition to Westinghouse Fuel and Minimum Critical Power Ratio Safety Limits," dated April 4, 2006

In Reference 1, Exelon Generation Company, LLC (EGC), requested an amendment to Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Renewed Facility Operating License Nos. DPR-29 and DPR-30 for Quad Cities Nuclear Power Station, Units 1 and 2, to support the transition to Westinghouse SVEA-96 Optima2 fuel. This request was subsequently approved by the NRC in Reference 2.

As part of the review of Reference 1, the NRC requested EGC provide plant specific values for the Oscillation Power Range Monitor (OPRM) scram setpoints and the Delta Critical Power Ratio/Initial Critical Power Ratio Versus Oscillation Magnitude (DIVOM) correlation for the next unit cycles, when they become available. The requested values for QCNPS, Unit 1 are now available and are provided below.

A QCNPS, Unit 1 specific analysis was performed to determine a DIVOM curve that is applicable to QCNPS, Unit 1 operating Cycle 20. The DIVOM analysis was performed using NRC approved methodologies and was 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 26% 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 QCNPS, Unit 1, Cycle 20, was developed. The limiting DIVOM curve is bounded by a slope of 0.35. However, a more conservative DIVOM slope of 0.45 was selected for application in the OPRM Trip Setpoint calculations.

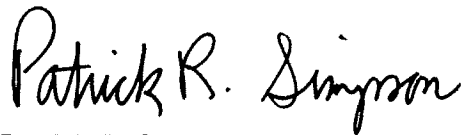
A calculation of the OPRM Amplitude Trip Setpoints (Sp), and associated OPRM Confirmation Count Trip Setpoints (Np), was performed. The OPRM trip setpoints are a function of the calculated DIVOM curve and the cycle specific Operating Limit Minimum Critical Power Ratio and Safety Limit Minimum Critical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

Based on the Cycle 20 cycle-specific parameters and the conservative DIVOM slope of 0.45, the required OPRM Amplitude Trip Setpoint (Sp) was determined to be 1.19. The associated OPRM Confirmation Count Trip Setpoint (Np) was determined to be 18.

There are no regulatory commitments contained within this letter.

Should you have any questions or require additional information, please contact Michelle Yun at 630-657-2818.

Respectfully,

A handwritten signature in black ink that reads "Patrick R. Simpson". The signature is written in a cursive, flowing style.

Patrick R. Simpson  
Manager - Licensing