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Quad Cities Nuclear Power Station
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SVP-05-082

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Quad Cities Nuclear Power Station, Units 1 and 2
Renewed Facility Operating License Nos. DPR-29 and 30
NRC Docket Nos. 50-254 and 50-265

Subject: Main Steam Safety Valve Performance at Quad Cities Nuclear Power Station

Reference: Letter from M. Banerjee (U. S. NRC) to C. M. Crane (Exelon Generation Company, LLC), "Issuance of Safety Evaluation Related to License Condition for Main Steam Safety Valve Setpoint Tolerances and Tolerance Uncertainty Treatment Methodology (TAC Nos. MC5018 and MC5019)," dated December 7, 2005

Quad Cities Nuclear Power Station (QCNPS) operating experience indicates that the as-found lift setpoints of the Main Steam Safety Valves (MSSVs) and Target Rock safety/relief valves (S/RVs) have deviated from the Technical Specification (TS) tolerance limit of plus or minus one percent (1%) on multiple occasions. As a result of these deviations, QCNPS is currently evaluating potential actions to address this trend.

First, Exelon Generation Company, LLC (EGC) has completed a Monte Carlo statistical analysis of the MSSV network to determine an upper tolerance limit that more accurately predicts the distribution of as-found lift pressures. The intent of the analysis was to demonstrate a statistically based alternative to traditional deterministically applied setpoint drift, which assumes that all of the valves drift to the highest possible setpoint. The Monte Carlo statistical analysis, approved by the NRC in the Referenced letter, utilized MSSV data from both Dresden Nuclear Power Station (DNPS) and QCNPS.

Although the results of the Monte Carlo analysis conclude that a change to the one percent TS tolerance limit is warranted, the limiting fuel reload analyses on both QCNPS units (i.e., the anticipated transient without scram peak pressure and ASME overpressure analyses) have been performed assuming upper tolerances greater than those determined by the Monte Carlo analysis. Therefore, the MSSVs are capable of performing their safety function.

QCNPS intends to submit a TS amendment request to modify the setpoint tolerance to a value consistent with the Monte Carlo statistical analysis.

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Second, QCNPS is evaluating a design modification that would increase the safety valve relief capacity (MSSV and S/RV) in order to regain margin that was lost as a result of implementing extended power uprate and more efficient reactor core designs. This design modification involves replacing two existing Electrometric Relief Valves (ERVs) on each unit with higher capacity S/RVs. This will increase the rate at which steam can be removed from the reactor vessel, lowering the peak pressure experienced by the vessel during design basis events.

Should you have any questions concerning this report, please contact Mr. W. J. Beck at (309) 227-2800.

Respectfully,



Timothy J. Tulon
Site Vice President
Quad Cities Nuclear Power Station

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station