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

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

Subject: Supplemental Information Concerning Request for License Amendment to Revise Technical Specification 3.4.5, "RCS Leakage Detection Instrumentation"

References:
1) Letter from J. L. Hansen (Exelon Generation Company, LLC) to U. S. NRC, "Request for License Amendment to Revise Technical Specification 3.4.5, 'RCS Leakage Detection Instrumentation,' to Allow Alternate Method of Verifying Drywell Leakage," dated August 28, 2009

In Reference 1, Exelon Generation Company, LLC (EGC) submitted a request to amend Appendix A, "Technical Specifications," (TS) of Renewed Facility Operating License Nos. DPR-19, DPR-25, DPR-29, and DPR-30 for Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2, respectively. The proposed amendment revises TS 3.4.5, "RCS Leakage Detection Instrumentation," to support implementation of an alternate method of verifying that leakage in the drywell is within limits.

During a subsequent teleconference between the NRC (C. Gratton) and EGC (J. Schrage), the NRC requested supplemental information concerning the design of the QCNPS DWEDS and DWFDS, including the instrumentation and alarm systems. The attachment to this letter provides the supplemental information requested by the NRC.

There are no regulatory commitments in this letter or the attachment.

Should you have any questions or require additional information, please contact Mr. John L. Schrage at (630) 657-2821.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 2nd day of June 2010.

Respectfully,

Jeffrey L. Hansen
Manager - Licensing

Attachment: Supplemental Information – Quad Cities Nuclear Power Station, License Amendment Request to Revise Technical Specification 3.4.5, "RCS Leakage Detection Instrumentation"

ATTACHMENT
Supplemental Information – Quad Cities Nuclear Power Station

License Amendment Request to Revise Technical Specification 3.4.5, "RCS Leakage Detection Instrumentation"

Additional Information

By letter dated August 28, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML092400548), Exelon Generation Company, LLC (EGC) proposed to amend Appendix A, Technical Specifications (TS) of Renewed Facility Operating License Nos. DPR-19 and DPR-25 for Dresden Nuclear Power Station, Units 2 and 3 (DNPS), and Renewed Facility Operating License Nos. DPR-29 and DPR-30 for Quad Cities Nuclear Power Station, Units 1 and 2.

The August 28, 2009 license amendment request (LAR) supported the implementation of an alternate method to quantify Reactor Coolant System (RCS) leakage in the primary containment (i.e., the drywell). The proposed alternate method uses the installed drywell equipment drain sump (DWEDS) monitoring system, with the drywell floor drain sump (DWFDS) overflowing to the DWEDS, to verify that RCS leakage in the drywell is within TS 3.4.4, "RCS Operational Leakage," limits. This configuration would only be used when the DWFDS monitoring system is unavailable.

In Attachment 1 to the August 28, 2009 LAR, EGC described the configuration and monitoring system for the DNPS and QCNPS DWFDS and DWEDS:

> "The DWEDS monitoring system is similar to the DWFDS monitoring system. Leakage into the DWEDS is considered identified leakage. Identified leakage is composed of the normal seal and valve-packing leakage and does not represent a safety consideration as long as the leakage is small compared to the available reactor coolant makeup capacity. The DWEDS monitoring system can be used in combination with the DWFDS monitoring system and other leak detection equipment to determine the source of leakage in the drywell. When a high level is reached in either the DWFDS or DWEDS, a level switch actuates to start the pumps when the pump discharge valves are open."

By letter dated August 6, 2008 (ADAMS Accession No. ML082320087), EGC submitted an emergency LAR that requested a similar change to DNPS TS 3.4.5 that enabled EGC to implement, on a temporary basis, the alternate RCS leakage detection method for DNPS Unit 3. In this emergency LAR, EGC described the configuration and monitoring system for the DNPS DWFDS and DWEDS:

> "The drywell equipment drain sump is physically located next to the drywell floor drain sump, with the top of both sumps at the same elevation approximately three feet apart. There are no obstructions between the two sumps to prevent or divert drywell floor drain sump overflow from reaching the drywell equipment drain sump. The control circuits for the two monitoring systems perform the same functions, and sump instrumentation consists of the same components and performs a similar function. Instruments for both monitoring systems are calibrated using the same plant procedure to satisfy TS SRs for functional testing and calibration. Recent performance of the drywell equipment drain sump pump flow instrumentation and sump level controls has demonstrated reliable performance."

ATTACHMENT
Supplemental Information – Quad Cities Nuclear Power Station

License Amendment Request to Revise Technical Specification 3.4.5, "RCS Leakage Detection Instrumentation"

During a subsequent teleconference between the NRC (C. Gratton) and EGC (J. Schrage) concerning the August 28, 2009 LAR, the NRC requested supplemental information concerning the design of the QCNPS DWEDS and DWFDS, including the instrumentation and alarm systems, similar to the information that had been previously provided for DNPS Unit 3.

EGC has verified that for both Unit 1 and Unit 2 at QCNPS, the DWEDS is physically located next to the DWFDS, with the top of both sumps at the same elevation, approximately three feet apart. There are no obstructions between the two sumps to prevent or divert drywell floor drain sump overflow from reaching the drywell equipment drain sump. The control circuits for the two monitoring systems perform the same functions, and sump instrumentation consists of the same components and performs a similar function. Instruments for both monitoring systems are calibrated using the same plant procedure to satisfy TS SRs for functional testing and calibration. Thus, the design of the QCNPS DWFDS and DWEDS, including the associated instrumentation and alarm systems, will ensure that there would be no significant extension of operator response time when one sump is overflowing into the other sump.