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

Attn: Mr. William T. Russell

Subject: Technical Specification Bases Change for Dresden Nuclear Power Station Units 2 and 3, and Quad Cities Nuclear Power Station Units 1 and 2.
NRC Docket Nos. 50-237, 50-249, 50-254 and 50-265

Pursuant to 10 CFR 50.59, Commonwealth Edison (ComEd) has changed the Shutdown Margin (SDM) section in Dresden Technical Specification Bases section 3.3.A.1 of Facility Operating Licenses DPR-19 and DPR-25 and Quad Cities Technical Specification Bases section 3.3.A.1 of Facility Operating Licenses DPR-29 and DPR-30. The Bases sections are being changed to require that an in-sequence shutdown margin test, instead of a local shutdown margin test, is performed during start up after refueling. These Bases changes do not involve changes to the Technical Specification Limiting Conditions For Operations or Surveillance Requirements.

The local shutdown margin test is demonstrated by full withdrawal of the strongest worth control rod and partial withdrawal of a diagonally adjacent control rod to a position calculated to insert at least R + 0.25%ΔK in reactivity. The value of R in %ΔK is the amount by which the core reactivity is calculated to increase during the operating cycle relative to the beginning of life reactivity. The in-sequence shutdown margin test uses the information from the actual critical rod configuration to ensure that the reactor can be made subcritical by at least R + 0.25%ΔK with the strongest worth control rod fully withdrawn.

The local shutdown margin test creates the potential for sudden unexpected criticals with fast periods because the worth of the control rod diagonally adjacent to the strongest worth control rod is maximized due to the highly peaked neutron flux distribution. The local shutdown margin test does not provide any significant information since the rod pulls do not result in criticality. It simply indicates that the reactor will remain subcritical after a certain amount of reactivity (which includes the strongest rod) has been added to meet the shutdown margin requirement. Also, the local shutdown margin test takes 2 to 3 hours of critical path time during a startup. The in-sequence shutdown margin test minimizes rod worth, flattens the flux distribution, and is therefore a safer method to determine shutdown margin.

ComEd has performed a Safety Analysis pursuant to 10 CFR 50.59, and determined that an Unreviewed Safety Question does not exist. These Bases changes have been reviewed and approved by ComEd On-Site and Off-Site Review in accordance with ComEd procedures. The marked up and approved Bases pages for Dresden and Quad Cities are attached.

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Please direct any questions you may have to this office.

Very truly yours,

Gary G. Benes

Gary G. Benes
Nuclear Licensing Administrator

Attachments

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