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June 8, 1993

Dr. Thomas E. Murley
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Subject: Dresden Nuclear Power Station Units 2 and 3,
Quad Cities Nuclear Power Station Units 1 and 2, and
LaSalle County Nuclear Power Station Units 1 and 2
Revised Control Rod Sequencing Methods
NRC Docket Nos. 50-237, 249, 254, 265, 373, and 374

- References:
- (a) IE Bulletin No. 79-12, "Fast Period Scrams at BWR Facilities", May 31, 1979.
 - (b) Cordell Reed letter to J.G. Keppler, "Dresden Station Units 1, 2, and 3, Quad-Cities Station Units 1 and 2, Response to IE Bulletin 79-12 'Short Period Scrams at BWR Facilities'", July 30, 1979.
 - (c) SIL No. 316, "Reduced Notch Worth Procedure", GE, November 1979.

Dear Dr. Murley:

The Reference (b) letter transmitted Commonwealth Edison Company's (CECo) response to the Reference (a) NRC Bulletin for Quad Cities and Dresden stations. Reference (b) committed CECo to following an "infinite lattice" sequencing technique in order to minimize the occurrence of short periods during startups. This technique was defined as banking out peripheral rods along with their internal counterparts while complying with Control Rod Drop Accident (CRDA) sequencing constraints. The infinite lattice technique treats the peripheral rods as part of a radially uniform "infinite lattice" rod pattern of the core. This is in contrast to withdrawing peripheral rods immediately after black and white conditions (50% control rod density) prior to the corresponding central region control rods.

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CECo now intends to modify this definition so that peripheral rods may be banked at fewer positions than their central region counterparts during some startups. All sequences will be consistent with those evaluated in the CRDA analysis and with in-sequence notch worth evaluations for the cycle. This change is consistent with the Reduced Notch Worth Procedure (Reference (c)). In addition, the proposed definition meets the intent of the Reference (a) NRC Bulletin and the original infinite lattice method's intent to reduce notch worths.

The new definition of infinite lattice sequencing would only be implemented on a startup, if heatup is complete, and steam production has commenced. This is acceptable since high notch worths and fast periods are not a concern after heatup is complete and significant voiding and pressurization has occurred. During heatup, peripheral rods will continue to be banked with their interior counterparts at positions consistent with the CRDA analysis and in-sequence notch worth evaluations.

The above changes will be reviewed under 10 CFR 50.59 for Dresden Units 2 and 3, Quad Cities Units 1 and 2, and LaSalle Units 1 and 2. Since no changes are required to the Technical Specifications of the three stations, CECo will implement any revisions to the current control rod sequencing strategies following completion of the On-Site Review of the 10 CFR 50.59 safety evaluation incorporating these changes.

If you have any questions, please contact this office.

Very truly yours,



Peter L. Piet
Nuclear Licensing Administrator

cc: J.B. Martin, Regional Administrator-RIII
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