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Exelon SM
Nuclear

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

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Subject: Response to Request for Additional Information Related to a Request for Exemption from the Provisions of 10 CFR 50.44, 10 CFR 50.46 and 10 CFR 50 Appendix K

Reference: Letter from Keith R. Jury (Exelon Generation Company, LLC) to NRC, "Request for Exemption from the Provisions of 10 CFR 50.44, 10 CFR 50.46 and 10 CFR 50 Appendix K for One Lead Test Assembly; and Request for an Increase in the Rod-Average Burnup Limit for Four Fuel Assemblies," dated January 17, 2003

In the referenced letter, in accordance with 10 CFR 50.12, "Specific exemptions," Exelon Generation Company, LLC (EGC) requested a temporary exemption from the requirements of 10 CFR 50.44, "Standards for combustible gas control system in light-water-cooled power reactor," 10 CFR 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," and 10 CFR 50 Appendix K, "ECCS Evaluation Models," for Byron Station, Unit 1, Cycle 13.

In the subject exemption request, EGC with Westinghouse Electric Company, LLC (i.e., Westinghouse) support, provided information justifying the use of a limited number of "lower tin" ZIRLO™ (i.e., LT-2) clad replacement fuel rods in one lead test assembly (LTA). After initial NRC review of the exemption request, a teleconference call was held on March 10, 2003, among NRC, EGC and Westinghouse personnel to clarify non-proprietary information that may be placed in the public domain related to the LT-2 cladding material properties, corrosion resistance and thermal creep. The following statement is non-proprietary and may be placed in the public domain.

> "Based on the material property testing that was conducted, it has been shown that the ZIRLO™ (LT-2) replacement rods will perform similarly to standard ZIRLO™. It was also confirmed that the ZIRLO™ (LT-2) replacement rods will have better corrosion resistance then standard ZIRLO™ or ZIRLO™ (LT-1) rods, where LT-1 is a previously NRC-exempted ZIRLO™ cladding with a slightly different tin content than LT-2 cladding. With respect to thermal creep, testing confirmed acceptable behavior of the ZIRLO™ (LT-2) replacement rods relative to standard ZIRLO™ or Zircaloy-4 cladding."

Should you have any further questions regarding proprietary and non-proprietary information related to the referenced submittal, please contact Mr. J. A. Bauer at (630) 657-2801.

Respectfully,

Kenneth A. Ainger for

Keith R. Jury
Director – Licensing
Mid-West Regional Operating Group