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October 22, 1998

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

Subject: Exemption Request for Two Lead Test Assemblies (LTAs)

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

Pursuant to Title 10, Code of Federal Regulations, Part 50, Section 12 (10 CFR 50.12), Commonwealth Edison (ComEd) Company requests a temporary exemption from the requirements of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50, Appendix K for Byron Station Units 1 and 2. This exemption will allow up to two Lead Test Assemblies (LTAs) containing fuel rods, guide thimble tubes, and instrumentation tubes fabricated with a low tin version of ZIRLO™. The exemption request is required since the tin content in the ZIRLO™ material will be below the current licensing basis of ZIRLO™ as specified in WCAP-12610-P-A, "VANTAGE + Fuel Assembly Reference Core Report." The LTAs are planned to be inserted into the Byron Station Unit 1 Cycle 10 core in non-limiting core locations during its next refueling outage. This refueling outage is scheduled to begin March 27, 1999. The exemption is needed to allow testing of these assemblies for Byron Station Unit 1 Cycle 10 and two cycles thereafter in either the Byron Station Unit 1 or Unit 2 core. This degree of flexibility, of using the LTAs in either unit, is desirable if initial installation or future re-insertion is delayed.

An optimization of ZIRLO™ corrosion resistance is being pursued to support the improved fuel performance and reliability at increasing burnup levels. Available industry data indicates that levels of tin composition near the lower end on the current range of ZIRLO™ should enhance the in-reactor corrosion resistance. The patent for ZIRLO™ specifies a tin composition that bounds the licensing basis of tin content. The licensing basis for ZIRLO™, as defined in WCAP-12610-P-A, specifies the tin composition as being between 0.80% and 1.20%. The proposed level of tin composition in the LTAs will be nominally between the lower bound patent limit and 0.80%. Further details justifying the acceptability of the low tin ZIRLO™ LTAs is provided in Attachment 1.

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The requirements of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50, Appendix K, only include standards and acceptance criteria for fuel rods clad with Zircaloy or ZIRLO™. Due to the tin composition of the LTAs falling below the licensing basis for ZIRLO™, but still within the patent's limits, this exemption is requested to allow use of these LTAs. ComEd believes that the standards of 10 CFR 50.12(a) are satisfied in this case. Special circumstances are present, pursuant to 10 CFR 50.12(a)(2)(ii), to warrant granting the exemption request.

ComEd requests that this exemption request be reviewed and approved by January 15, 1999, in order to support fuel procurement and delivery for Byron Station Unit 1 Cycle 10.

Enclosed is:

1. One copy of Attachment 1, "Request for Exemption From the Provisions of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50 Appendix K For Two Lead Test Assemblies (LTAs) and Supporting Justification," (Proprietary), October 1998.
2. One copy of Attachment 1, "Request for Exemption From the Provisions of 10 CFR 50.44, 10 CFR 50.46, and 10 CFR 50 Appendix K For Two Lead Test Assemblies (LTAs) and Supporting Justification," (Non-Proprietary), October 1998.

Also enclosed are a Westinghouse authorization letter, CAW-98-1291 and accompanying Affidavit, Proprietary Information Notice, and Copyright Notice.

As Item 1 contains information proprietary to Westinghouse Electric Company, a division of CBS Corporation ("Westinghouse"), it is supported by an affidavit signed by Westinghouse, the owner of the information. The Affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.790 of the Commission's regulations.

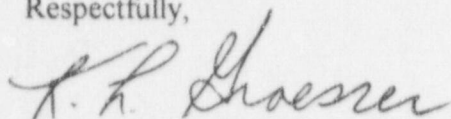
Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse Affidavit should reference CAW-98-1291 and should be addressed to Henry A. Sepp, Manager of Regulatory and Licensing Engineering, Westinghouse Electric Company, P. O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Actions described in the submittal represent intended or planned actions by ComEd. They are described for the NRC's information and are not regulatory commitments.

Should you have any questions, please contact Mr. B. J. Adams at (815) 234-5441, extension 2280.

Respectfully,

A handwritten signature in cursive script, appearing to read "K. L. Graesser".

K. L. Graesser
Site Vice President
Byron Station

Attachments

cc: Regional Administrator - USNRC, Region III
NRC Senior Resident Inspector - Byron Station