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New York Power Authority

Ralph E. Beedle
Executive Vice President
Nuclear Generation

January 8, 1992
IPN-92-002

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Subject: **Indian Point 3 Nuclear Power Plant**
Docket No. 50-286
Proposed Changes to Technical Specifications
Regarding Fuel Assemblies with ZIRLO™ Cladding

Dear Sir:

In order to use a new type of fuel cladding at Indian Point 3 (IP3), the New York Power Authority, by this letter, is:

- proposing to revise the IP3 Technical Specifications, sections 5.3 and 6.9, to address the use of ZIRLO™, as well as Zircaloy-4, fuel rod cladding,
- requesting exemptions from the Code of Federal Regulations (CFR), specifically from 10 CFR 50.44, 10 CFR 50.46, and Appendix K to 10 CFR 50, since these regulations include specific references to fuel pellets with Zircaloy cladding, and
- providing an analysis (required by 10 CFR 51.52(b), because 10 CFR 51.52(a) includes a specific reference to fuel pellets encapsulated in Zircaloy) of the effects (on 10 CFR 51.52, Table S-4) of using ZIRLO™ fuel cladding.

To determine compliance with 10 CFR 50.46 for the use of ZIRLO™ cladding, the following methods were used. An IP3 specific large break LOCA (loss-of-coolant-accident) analysis (single limiting break with a discharge coefficient of 0.4) was performed to determine a large break LOCA PCT (peak cladding temperature). The large break LOCA PCT included the PCT results of the 1981 Westinghouse Evaluation Model with BART/BASH and all permanent and temporary PCT assessments that Westinghouse has applied to IP3. The small break LOCA evaluation was performed using a plant similar to IP3 to derive a ΔPCT for ZIRLO™ cladding, and this ΔPCT was then added to the current IP3 small break LOCA PCT. An IP3 specific small break LOCA evaluation will be performed and submitted to the NRC staff in February of 1992. The small break LOCA analysis was previously bounded by the large break analysis, and the Authority expects the new small break analysis to be bounded by the new large break analysis. For more detailed information on the evaluation methods used, see Attachment III to this application.

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The signed original of the Application for Amendment to Operating License is enclosed for filing. Attachments I and II to this application contain the proposed changes to the Technical Specifications and the associated Safety Evaluation. Attachment III is a report entitled "Safety Assessment for the Indian Point Unit 3 Fuel Assemblies with ZIRLO™ Clad Fuel Rods."

A copy of this application and the associated attachments are being provided to the designated New York State official as required by 10 CFR 50.91.

In order to support IP3 cycle 8/9 refueling outage activities, the Authority requests approval of the use of ZIRLO™ cladding prior to fuel loading (estimated to begin in early May, 1992). If you have any questions, please contact Mr. P. Kokolakis.

Very truly yours,

Ralph E. Beedle
Executive Vice President
Nuclear Generation

att: as stated

cc: U.S. Nuclear Regulatory Commission
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