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James Knubel Senior Vice President and Chief Nuclear Officer

June 19, 1997 IPN-97-078

Chief, Rules Review and Directives Branch U.S. Nuclear Regulatory Commission Mail Stop T-6D-69 Washington, DC 20555-0001

Subject:

Indian Point 3 Nuclear Power Plant Docket No. 50-286 <u>Comments on Draft Version of Bulletin 96-01, Supplement 1</u>

References:

1.

Proposed Generic Communication - Control Rod Insertion Problems, Federal Register Notice, Volume 62, No. 97, pages 27629 - 27632, dated May 20, 1997, "NRC Bulletin 96-01, Supplement 1: Control Rod Insertion Problems."

 Westinghouse Owners Group letter to NRC (OG-97-061), "Westinghouse Owners Group Comments on Proposed NRC Bulletin 96-01 Supplement: Control Rod Insertion Problems Notice of Opportunity for Public Comment," dated June 19, 1997.

Dear Sir:

The Authority has reviewed the Federal Register notice (Reference 1) soliciting public comments on the proposed draft of Supplement 1 to Bulletin 96-01. The Authority endorses the comments sent to you by the Westinghouse Owners Group (WOG) (Reference 2). The Authority's specific comments are contained in Attachment I. There are no new commitments contained in this submittal. If you have any questions, please contact Ms. C. D. Faison.

Very truly yours,

J. Knubel

Senior Vice President and Chief Nuclear Officer

Attachment: As stated

cc: Regional Administrator U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406

> Resident Inspector's Office Indian Point Unit 3 U.S. Nuclear Regulatory Commission P.O. Box 337 Buchanan, NY 10511

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ATTACHMENT I TO IPN-97-078

COMMENTS ON PROPOSED BULLETIN SUPPLEMENT ON CONTROL ROD INSERTION PROBLEMS

NEW YORK POWER AUTHORITY INDIAN POINT 3 NUCLEAR POWER PLANT DOCKET NO. 50-286 DPR-64



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Comments on Draft Bulletin 96-01, Supplement 1

The Authority provides the following comments for the NRC's consideration for incorporation into the final issue of Supplement 1 to Bulletin 96-01.

1. The proposed bulletin supplement (Reference 1) states that the requested actions are required to demonstrate the ability to insert the control rods at high burnups. The cycle 9 core at Indian Point 3 had 12 ft. fuel assemblies without intermediate flow mixers (IFMs) in rodded locations. Three (3) sets of rod drop tests were performed during the last fuel cycle (cycle 9). The results of the tests performed on January 20, 1997 were submitted to the NRC in Reference 2. These tests included 9 fuel assemblies in excess of 40,000 MWD/MTU. The three sets of test results demonstrate that no rod drop time deterioration occurred as a function of cycle burnup.

Therefore, the Authority proposes an alternative course of action to those requested by the proposed bulletin supplement. Specifically, the Authority suggests that the bulletin supplement should be revised to incorporate the testing criteria provided by the WOG in Reference 3. Those test criteria are based upon the application of a mechanical model that does not set arbitrary burnup limits but makes use of past plant data and inherent differences in fuel types. If incorporated into the bulletin supplement, this test criteria would reduce the need for additional plant shutdowns, thereby reducing the risk associated with plant heatups and cooldowns.

- 2. The proposed bulletin states that the NRC staff considers fuel with IFMs susceptible to thimble tube distortion which can lead to incomplete rod insertion. As stated in Reference 3, drag and drop test data for fuel assemblies with IFMs and high burnups do not support this NRC position. The WOG contends (Reference 3) that the fuel assemblies with IFMs can achieve full control rod insertion at burnups well in excess of the NRC limit. As stated previously, the Authority suggests the use of the testing requirements proposed by Westinghouse in Reference 3, rather than the predetermined burnup limits contained in Reference 1.
- 3. The proposed bulletin supplement states that once a certain burnup level is reached, tests must be performed every 2,500 MWD/MTU until the end of cycle. The assembly dimensional changes accompanying a burnup of 2,500 MWD/MTU are small and are not expected to be statistically significant. Therefore, as stated in Reference 3, the Authority suggests the use of a mechanical model to establish appropriate burnup intervals.
- 4. The proposed bulletin supplement states on page 27632 that "rigorous engineering analysis" can be used to demonstrate the ability to insert the control rods at high burnups. Please describe in the final bulletin supplement what is considered as acceptable rigorous engineering analysis.





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5. A literal interpretation of the requested actions requires rod drop time testing each time any fuel assembly reaches the burnup limit. The Authority believes that the intent of the required actions is to perform rod drop tests on all assemblies when the first fuel bundle exceeds the burnup limit. Further testing would then be conducted when the change in the core average burnup reaches 2,500 MWD/MTU. (As stated above, the Authority believes this burnup interval should be based upon the use of a mechanical model.) Please clarify this point in the final version of the bulletin supplement.

References

- 1. Proposed Generic Communication Control Rod Insertion Problems, Federal Register Notice, Volume 62, No. 97, pages 27629 - 27632, dated May 20, 1997, "NRC Bulletin 96-01, Supplement 1: Control Rod Insertion Problems."
- 2. NYPA letter, R. J. Barrett to NRC (IPN-97-036), "Updated Response to NRC Bulletin 96-01: Recent Results and Revised Commitment for Control Rod Testing," dated March 10, 1997.
- 3. Westinghouse Owners Group letter to NRC (OG-97-061), "Westinghouse Owners Group Comments on Proposed NRC Bulletin 96-01 Supplement: Control Rod Insertion Problems Notice of Opportunity for Public Comment," dated June 19, 1997.