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June 19, 2000

Re: Indian Point Unit No. 2

Docket No. 50-247

Document Control Desk US Nuclear Regulatory Commission Mail Station P1-137 Washington, DC 20555

SUBJECT: Indian Point Unit 2 Cycle 15 Core Operating Limit Report (COLR)

Dear Sirs:

In accordance with Indian Point Unit 2 Technical Specification 6.9.1.11, enclosed is the IP2 COLR for Cycle 15.

Should you or your staff have any questions concerning this item, please contact Mr. John McCann, Manager, Nuclear Safety & Licensing (914) 734-5129.

Sincerely.

ADDI

cc: Mr. Hubert J. Miller
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Patrick D. Milano, Project Manager Project Directorate I-1 Division of Reactor Projects I/II US Nuclear Regulatory Commission Mail Stop 14B-2 Washington, DC 20555

Senior Resident Inspector US Nuclear Regulatory Commission PO Box 38 Buchanan, NY 10511

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CYCLE 15 CORE OPERATING LIMITS REPORT

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NOTE

The Technical Specification references shown next to each Factor <u>OR</u> Limit in this COLR, are there to identify the corresponding sections in Technical Specifications, that refer to the COLR.

The data presented in this report applies to <u>Cycle 15 Only</u> and may <u>NOT</u> be used for other cycles of operation. Any technical change to this graph requires a Safety Evaluation to be performed.

NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR

NOTE

P is the fraction of full power at which the core is operating.

 $F_{\Delta}^{N} \leq 1.70 [1 + 0.3 (1-P)]$

Tech. Spec. 3.10.2.1

HEIGHT DEPENDENT HEAT FLUX HOT CHANNEL FACTOR FOR ≤ 25% TUBE PLUGGING

NOTE

K(Z) is the fraction given in Figure 1 AND Z is the core height location of F_0 .

<u>IF</u> P > .5, $F_Q(Z) \le (2.50/P) \times K(Z)$

Tech. Spec. 3.10.2.1

<u>IF</u> $P \le .5$, $F_0(Z) \le (5.00) \times K(Z)$

Tech. Spec. 3.10.2.1

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AXIAL FLUX DIFFERENCE ENVELOPE LIMITS

The Indicated Axial Flux Difference limit is the Target Band; i.e., the Target ± 5%. Tech. Spec. 3.10.2.6.1

The Axial Flux Difference Envelope Limits at 90 percent power are -11%, +11% AND increase by -1% and +1%, for each 2% of rated power below 90% power, as indicated by Graph RPC-5, Target Flux And Operating. Envelope Diagram.

Tech. Spec. 3.10.2.6.1

INSERTION LIMITS

The Shutdown Banks shall be fully withdrawn when the reactor is critical \underline{OR} approaching criticality.

Tech. Spec. 3.10.4.1

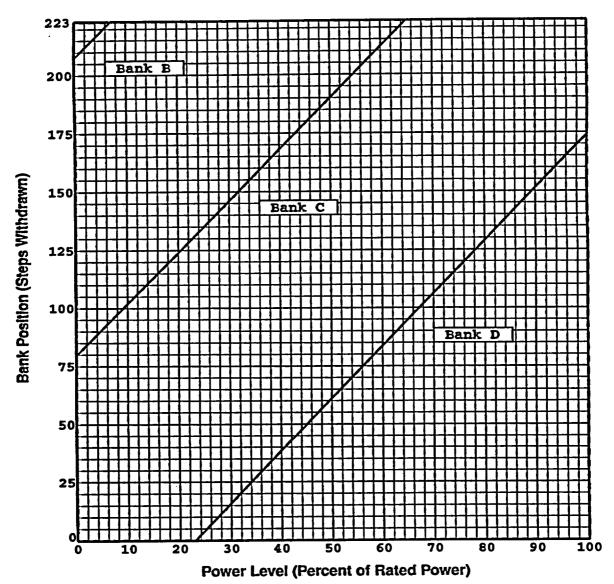
The Control Bank Insertion Limits for Criticality, are as indicated by Figure 2. Tech. Spec. 3.10.4.2

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FIGURE 2

FIGURE 3.10-3. ROD BANK INSERTION LIMITS (Four Loop Operation) 100 Step Overlap

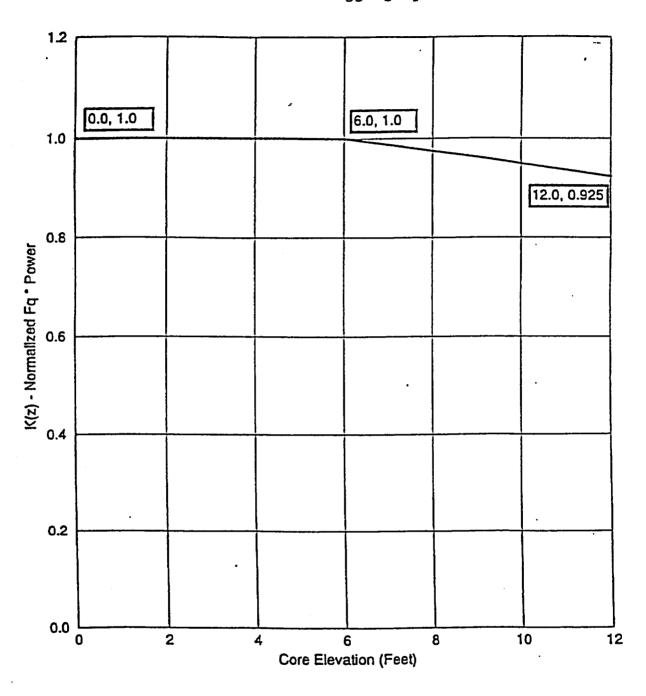


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FIGURE 1 HOT CHANNEL FACTOR NORMALIZED OPERATING ENVELOPE (For S.G. Tube Plugging up to 25%)



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