



NOTE: Banks A and B are fully withdrawn at zero power

Figure 3.10-4
Four Loop Operation

Insertion Limits 100 Step
Overlap

Amendment No. ~~15~~

8703160211 870310
PDR ADDOCK 05000286
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ATTACHMENT II to IPN-87-015
SAFETY EVALUATION OF PROPOSED
TECHNICAL SPECIFICATIONS

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

I. Description of Change

This revision to the Indian Point 3 Technical Specifications seeks to revise Figure 3.10-4 which provides the control bank insertion limit curves.

The current insertion limit curve for D control bank is a straight line originating at the point corresponding to an insertion of 100% (fully inserted) at 15% of rated power and terminating at the point corresponding to an insertion of 30% at 100% rated power. The revised D control bank insertion limit curve will be a straight line parallel to the current curve and will terminate at the point corresponding to an insertion of 22% at 100% rated power.

The insertion limit curves for C and D control banks are parallel and are separated by a distance reflecting the 100 step overlap between these banks. Therefore, the C control bank insertion limit curve must also be revised to maintain the distance between the D control bank insertion limit curve reflecting the 100 step overlap.

During a core design it must be demonstrated that the core peaking factors are not violated at any time during core life assuming the control banks are inserted to the Technical Specifications limit. A reduction in the control bank insertion limits will result in a reduction in the calculated axial core peaking factor (F_Q). The proposed insertion limits will expedite the Cycle 6 core design efforts to satisfy the F_Q limit. That is, the reduction in operational flexibility posed by the proposed change will result in an increased flexibility in the core design effort. Furthermore, the proposed change will reduce the possibility of reconfiguring the fresh burnable poison rodlets associated with the reload Optimized Fuel Assemblies.

II. Evaluation of Change

The proposed Technical Specifications provide a revised C and D control bank insertion limits. The extent of allowable control bank insertion during normal power operation is being reduced. This proposed change results in a more restrictive mode of operation than that dictated by the current Technical Specifications.

The FSAR provides transient analyses supporting plant operation with a D control bank insertion range from fully withdrawn to 30% inserted at 100% rated power. The proposed change will limit the D control bank insertion range from fully withdrawn to 22% at 100% rated power. There will be a similar reduction in the allowable band

of plant operations for all other power levels. This band of plant operation is within that band of plant operation supported by the FSAR transient analyses.

The reduction in the band of allowable plant operation involves the removal of operating area that is not utilized. This area has not been utilized for the excore/incore recalibration which involves the deliberate insertion of the rods to induce an axial xenon oscillation. As such, the proposed change will not adversely affect plant operations.

III. No Significant Hazards Evaluation

In accordance with requirements of 10 CFR 50.92, the application has been determined to involve no significant hazards based upon the following:

1. Does the proposed license amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response

The FSAR provides the transient analyses supporting plant operation with a D control bank insertion range from fully withdrawn to 30% inserted at 100% rated power. The proposed change will limit the D control bank insertion range from fully withdrawn to 22% at 100% power. There will be a similar reduction in the band of allowable plant operations for all other power levels. This band of plant operation is within that band of plant operation supported by the FSAR transient analyses. As plant operations under the proposed Technical Specifications will be bounded by the plant operations supported by the FSAR transient analyses the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed license amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response

Plant operations under the revised control bank insertion limits is bounded by the plant operations supported by the FSAR transient analyses. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response

As plant operations under the proposed Technical Specifications will be bounded by the plant operations supported by the FSAR transient analyses, the proposed amendment does not involve a significant reduction in a margin of safety.

IV. IMPACT OF CHANGE

This change will not impact the following:

- ALARA Program
- Fire Protection Program
- Emergency Plant
- FSAR or SER Conclusions
- Overall Plant Operations

V. REFERENCES

- a) IP-3 FSAR
- b) IP-3 SER

VI. CONCLUSION

This change: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the basis for any Technical Specification; d) does not constitute an unreviewed safety question as defined in 10 CFR 50.59; e) involves no significant hazards considerations as defined in 10 CFR 50.92.