C. Identify and correct the cause of the out-of-limit condition prior to increasing thermal power above the reduced thermal power limit required by action A and/or B, above. Subsequent power increases may proceed provided that $F_{\Delta H}^{N}$ is demonstrated, through incore flux mapping, to be within its limits prior to exceeding the following thermal power levels:

   i. 50% of RATED POWER,
   ii. 75% of RATED POWER, and
   iii. Within 24 hours of attaining ≥ 95% of RATED POWER

3. If the $F_Q^N(Z)$ equilibrium relationship is not within its limit:

   A. Reduce the thermal power ≥ 1% RATED POWER for each 1% the $F_Q^N(Z)$ equilibrium relationship exceeds its limit within 15 minutes after each determination and similarly reduce the Power Range Neutron Flux-High Trip Setpoints and the Overpower ΔT Trip Setpoints within 72 hours by ≥ 1% for each 1% $F_Q^N(Z)$ equilibrium relationship exceeds its limit.

   B. If the actions of TS 3.10.b.3.A are not completed within the specified time, then reduce thermal power to ≤ 5% of RATED POWER within the next 6 hours.

   C. Verify the $F_Q^N(Z)$ equilibrium relationship and the $F_Q^N(Z)$ transient relationships are within limits prior to increasing thermal power above the reduced thermal power limit required by action A, above.

4. Power distribution maps using the movable detection system shall be made to confirm that the hot channel factor limits of TS 3.10.b.1 are satisfied. (Note: time requirements may be extended by 25%)

   A. For $F_Q^N(Z)$ equilibrium relationship, once after each refueling prior to thermal power exceeding 75% of RATED POWER; and once within 12 hours after achieving equilibrium conditions, after exceeding, by ≥ 10% of RATED POWER, the thermal power at which the $F_Q^N(Z)$ equilibrium relationship was last verified; and 31 effective full power days thereafter.

   B. For $F_{\Delta H}^{N}$, following each refueling prior to exceeding 75% RATED POWER and 31 effective full power days thereafter.

5. The measured $F_Q^N(Z)$ under equilibrium conditions shall satisfy the $F_Q^N(Z)$ transient relationship for the central axial 80% of the core as specified in the COLR.

6. Power distribution maps using the movable detector system shall be made to confirm the transient relationship of $F_Q^N(Z)$ specified in the COLR according to the following schedules with allowances for a 25% grace period:

   A. Once after each refueling prior to exceeding 75% RATED POWER and every 31 effective full power days thereafter.

   B. Once within 12 hours of achieving equilibrium conditions after reaching a thermal power level > 10% higher than the power level at which the last power distribution measurement was performed in accordance with TS 3.10.b.6.A.

C. If a power distribution map measurement indicates that the $F_Q^N(Z)$ transient relationship's margin to the limit, as specified in the COLR, has decreased since the previous evaluation, then either of the following actions shall be taken:

   i. $F_Q^N(Z)$ transient relationship shall be increased by the penalty factor specified in the COLR for comparison to the transient limit as specified in the COLR and reverified within the transient limit, or

   ii. Repeat the determination of the $F_Q^N(Z)$ transient relationship once every seven effective full-power days until either i. above is met, or two successive maps indicate that the $F_Q^N(Z)$ transient relationship's margin to the transient limit has not decreased.

7. If, for a measured $F_Q^N(Z)$, the transient relationship of $F_Q^N(Z)$ specified in the COLR is not within limits, then take the following actions:

   A. Reduce the axial flux difference limits ≥ 1% for each 1% the $F_Q^N(Z)$ transient relationship exceeds its limit within 4 hours after each determination and similarly reduce the Power Range Neutron Flux-High Trip Setpoints and Overpower ΔT Trip Setpoints within 72 hours by ≥ 1% that the maximum allowable power of the axial flux difference limits is reduced.

   B. If the actions of TS 3.10.b.7.A are not completed within the specified time, then reduce thermal power to ≤ 5% of rated power within the next 6 hours.

   C. Verify the $F_Q^N(Z)$ equilibrium relationship and the $F_Q^N(Z)$ transient relationship are within limits prior to increasing thermal power above the reduced thermal power limit required by action A, above.

8. Axial Flux Difference

   NOTE: The axial flux difference shall be considered outside limits when two or more operable excore channels indicate that axial flux difference is outside limits.

   A. During power operation with thermal power ≥ 50 percent of RATED POWER, the axial flux difference shall be maintained within the limits specified in the COLR.

      i. If the axial flux difference is not within limits, reduce thermal power to less than 50% RATED POWER within 30 minutes.

3. Deleted.

4. Core Operating Limits Report (COLR)

A. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

(1)	TS 2.1	Reactor Core Safety Limit
(2)	TS 2.3.a.3.A	Overtemperature ΔT Setpoint
(3)	TS 2.3.a.3.B	Overpower ΔT Setpoint
(4)	TS 3.1.f.3	Moderator Temperature Coefficient (MTC)
(5)	TS 3.8.a.5	Refueling Boron Concentration
(6)	TS 3.10.a	Shutdown Margin
(7)	TS 3.10.b.1.A	$F_Q^N(Z)$ Limits
(8)	TS 3.10.b.1.B	$F_{\Delta H}^N$ Limits
(9)	TS 3.10.b.5	$F_Q^N(Z)$ Limits
(10)	TS 3.10.b.6.C.i	$F_Q^N(Z)$ penalty
(11)	TS 3.10.b.8	Axial Flux Difference Target Band
(12)	TS 3.10.b.8.A	Axial Flux Difference Envelope
(13)	TS 3.10.d.1	Shutdown Bank Insertion Limits
(14)	TS 3.10.d.2	Control Bank Insertion Limits
(15)	TS 3.10.k	Core Average Temperature
(16)	TS 3.10.l	Reactor Coolant System Pressure
(17)	TS 3.10.m.1	Reactor Coolant Flow

B. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC. When an initial assumed power level of 102% of the original rated power is specified in a previously approved method, 100.6% of uprated power may be used only when the main feedwater flow measurement (used as the input for reactor thermal output) is provided by the Crossflow ultrasonic flow measurement system (Crossflow system) as described in report (15) listed below. When main feedwater flow measurements from the Crossflow System are unavailable, a power measurement uncertainty consistent with the instrumentation used shall be applied.

Future revisions of approved analytical methods listed in this Technical Specification that currently reference the original Appendix K uncertainty of 102% of the original rated power should include the condition given above allowing use of 100.6% of uprated power in the safety analysis methodology when the Crossflow system is used for main feedwater flow measurement.

The approved analytical methods are described in the following documents.

(1) Deleted

(2) Kewaunee Nuclear Power Plant – Review For Kewaunee Reload Safety Evaluation Methods Topical Report WPSRSEM-NP.

(3) S.M. Bajorek, et al., WCAP-12945-P-A (Proprietary), Westinghouse Code Qualification Document for Best-Estimate Loss-of –Coolant Accident Analysis, Volume I, and Volume II-V.

(4) N. Lee et al., "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code," WCAP-10054-P-A.

(5) C.M. Thompson, et al., "Addendum to the Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection into the Broken Loop and COSI Condensation Model," WCAP-10054-P-A, Addendum 2.

(6) XN-NF-82-06 (P)(A) Revision 1 and Supplements 2, 4, and 5, "Qualification of Exxon Nuclear Fuel for Extended Burnup, Exxon Nuclear Company.

(7) ANF-88-133 (P)(A) and Supplement 1, "Qualification of Advanced Nuclear Fuels' PWR Design Methodology for Rod Burnups of 62 GWd/MTU," Advanced Nuclear Fuels Corporation.

(8) EMF-92-116 (P)(A), "Generic Mechanical Design Criteria for PWR Fuel Designs," Siemens Power Corporation.

(9) WCAP-10216-P-A, "Relaxation of Constant Axial Offset Control FQ Surveillance Technical Specification."

(10) WCAP-9272-P-A, "Westinghouse Reload Safety Evaluation Methodology."

(11) WCAP-8745-P-A, Design Bases for the Thermal Overtemperature ΔT and Thermal Overpower ΔT trip functions.

(12) S.I. Dederer, et al., WCAP-14449-P-A, Application of Best-Estimate Large-Break LOCA Methodology to Westinghouse PWRs with Upper Plenum Injection.

(13) WCAP-12610-P-A, "VANTAGE+ Fuel Assembly Reference Core Report."

(14) WCAP-11397-P-A, "Revised Thermal Design Procedure."

(15) CENP-397-P-A, "Improved Flow Measurement Accuracy Using Cross Flow Ultrasonic Flow Measurement Technology."

(16) Topical Report DOM-NAF-5-A, "Application of Dominion Nuclear Core Design and Safety Analysis Methods to the Kewaunee Power Station (KPS)."

C. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

D. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

E. The COLR will contain the complete identification of the TS approved analytical methods used to prepare the COLR (i.e. report number, title, revision, date, and any supplements).