

a. **Moderator Temperature Coefficient (α_M)**

Calculations of α_M are performed using the methods described in Section 2. Cycle specific calculations for this accident are made at unrodded full power.

b. **Doppler Temperature Coefficient (α_D)**

Calculations of α_D are performed in accordance with the procedure described in Section 2.

c. **Boron Concentration Reactivity Coefficient (α_B)**

Calculations of α_B are performed using methods described in Section 2. Cycle specific calculations for this accident are made at unrodded full power.

d. **Shutdown Margin (SDM)**

The shutdown margin will be calculated and compared with the limiting assumptions used in the safety analysis using the methods described in Section 2.0.

e. **Nuclear Enthalpy Rise Hot Channel Factor ($F_{\Delta H}$)**

The maximum core $F_{\Delta H}$ is assumed to remain within the current limits as defined in the Technical Specifications for allowable combinations of axial offset and power level. For Prairie Island, the continuous surveillance of the power distribution is accomplished with the excore detectors using the Exxon PDC-IIa⁽³⁾ scheme.

3.5.5 Reload Safety Evaluations

All the cycle specific parameters discussed above are adjusted to include model reliability factors, RF_1 , and biases, B_1 . These results are then compared to the bounding values assumed in the safety analysis. The cycle specific parameters are acceptable if the following inequalities are met:

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CYCLE SPECIFIC PARAMETERS

SAFETY ANALYSIS PARAMETERS

a. $\alpha_M + RF_M + B_M$	\leq	α_M (least negative bounding value)
b. $\alpha_D * (1 - RF_D)$	\leq	α_D (least negative bounding value)
c. $\alpha_B * (1 + RF_B) * (1 + B_B)$	\geq	α_B (most negative bounding value)
d. Shutdown Margin	\geq	Shutdown Margin (bounding)
e. $(F_{\Delta H} + RF_{F\Delta H} + B_{F\Delta H}) * (1 + T)$	\leq	$F_{\Delta H}$ (Technical Specifications)

APPENDIX H

H.1 Changes Made In Revision 7 To This Report

The format of this document has changed slightly between Revisions 6 and 7. Most of this was due to the use of a different word processor which reformatted the entire document. For reference, alterations made in Revision 7 are summarized below.

Rev. 6 Page Number(s)	Rev. 7 Page Number(s)	Description of Change
1	1*	Revision number and date were updated.
2,3	2*,3*	Margins were adjusted.
4-12	4-12*	Provided additional sections in Table of Contents, adjusted titles of various figures (but not the actual figures).
13-14	13-14	Text was added to describe the addition of Appendix G.
47	49	Changed text to show VIPRE is used rather than COBRA.
50	52	The equation for Moderator Temperature Coefficient was corrected. An error introduced in Rev. 6 in the inequality for excore tilt was also corrected.
66, 67	69, 70*	Corrected the character for delta in the text. Text was added to describe the addition of Appendix G.
68	71, 72	Clarification of shutdown margin.
84, 97, 133, 145	88, 101, 138, 150	Provided additional information for the Doppler Coefficient.
131	136	Corrected number of pumps assumed to trip in each figure.
133, 145	138, 150	Added Shutdown Margin to the Cycle Specific Parameters list and text describing it.
155	160	Correct typo on pressure at which steamline break occurs.
157	163	Pressure under (e) is corrected.
188	194	The equations for β_{eff} and $\Delta\rho_{EJECT}$ were corrected.
200	206	The equation for Boron Reactivity Coefficient was corrected.
257	264*	Corrected the units in two columns.
263	270*	Changed $f(\Delta)$ and Δ to $f(\Delta I)$ and ΔT .
n/a	293-298	Added Appendices G and H.
various	various*	Corrected spelling and grammar, added spaces to separate words, corrected subject / verb agreement, etc.

* No revision bars are provided for spelling and grammar corrections or text format changes.