

ATTACHMENT 2

BW1C5 Core Operating Limits Report (COLR)

BRAIDWOOD UNIT 1, CYCLE 5

OPERATING LIMIT REPORT - F_{xy} PORTION

This Radial Peaking Factor Limit Report is provided in accordance with paragraph 6.9.1.9 of the Braidwood Unit 1 Nuclear Plant Technical Specifications.

The F_{xy} limits for RATED THERMAL POWER within specified core planes for Cycle 5 shall be:

a: For the lower core region from greater than or equal to 0% to less than or equal to 50%:

1) For all core planes containing bank "D" control rods:

$$F_{xy}^{RTP} \leq 3.374$$

2) For all un-rodged core planes:

$$F_{xy}^{RTP} \leq 1.761$$

b: For the upper core region from greater than 50% to less than or equal to 100%:

1) For all core planes containing bank "D" control rods:

$$F_{xy}^{RTP} \leq 2.195$$

2) For all unrodged core planes:

$$F_{xy}^{RTP} \leq 1.772$$

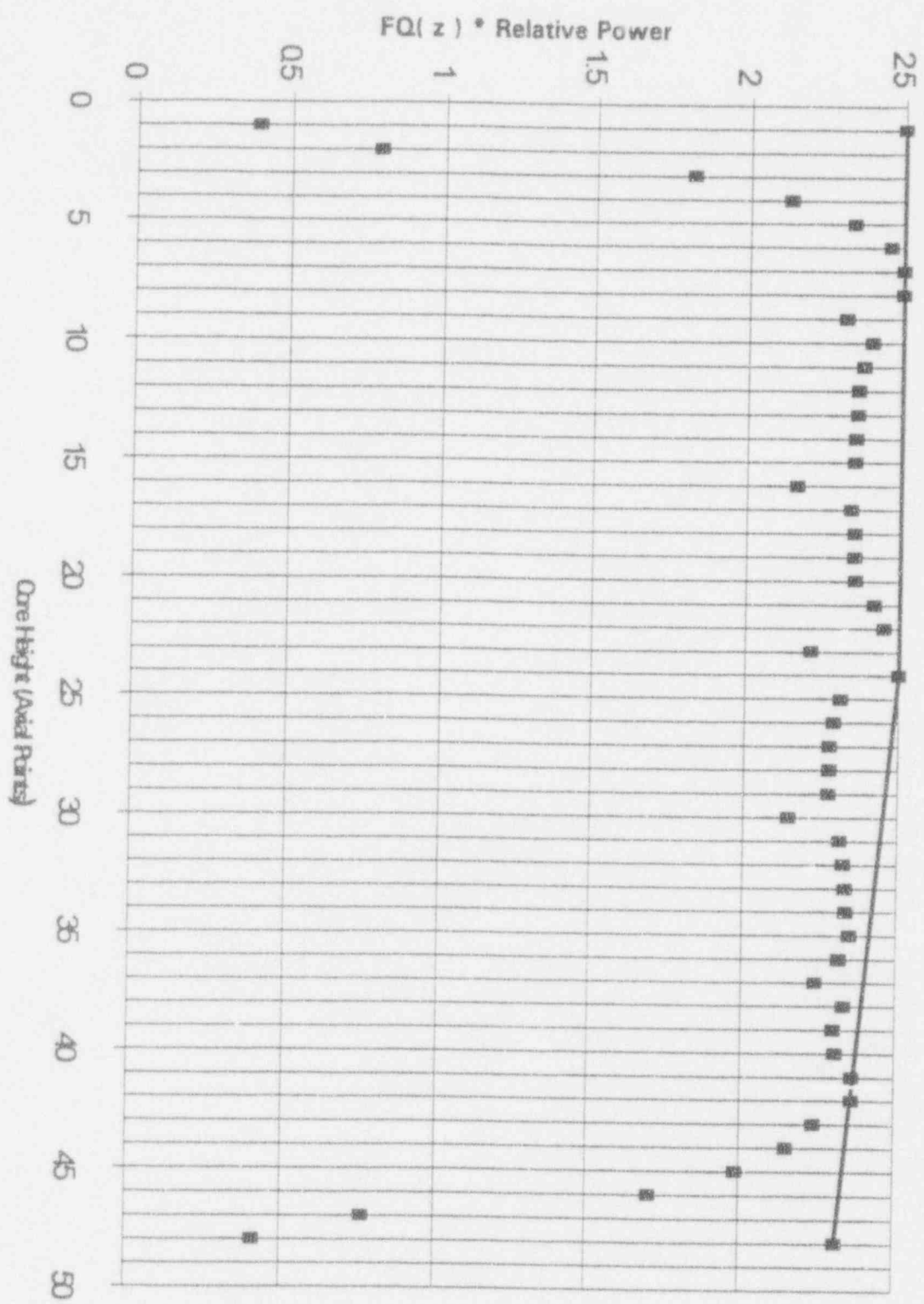
These F_{xy}(z) limits were used to confirm that the heat flux hot channel factor FQ(z) will be limited to the Technical Specification values of

$$FQ(z) \leq \left[\frac{250}{P} \right] [K(z)] \text{ for } P > 0.5 \text{ and}$$

$$FQ(z) \leq [5.00] [K(z)] \text{ for } P \leq 0.5$$

assuming the most limiting axial power distributions expected to result from the insertion and removal of control Banks C and D during operation, including the accompanying variations in the axial xenon and power distributions as described in the "Power Distribution Control and Load Following Procedures," WCAP-8403, September 1974. Therefore, these F_{xy} limits provide assurance that the initial conditions assumed in the LOCA analysis and the ECCS acceptance criteria of 10 CFR 50.46 are met.

See the attached figure for the plot of $[F_Q^T * P_{rel}]$ vs. Axial Core Height.



ATTACHMENT 3

References

1. Westinghouse WCAP-9272-P-A, dated October 1985; "Westinghouse Reload Safety Evaluation Methodology," (originally issued March 1978).
2. CECo submittal, J.A. Silady to T.E. Murley dated July 13, 1990; entitled "Commonwealth Edison Company Topical Report on Benchmark of PWR Nuclear Design Methods Using The Phoenix-P and ANC Computer Codes, NRC Docket Nos. 50-295/304, 50-454/455, and 50-456/457".
3. NRC SER on CECo's Neutronics Topical dated March 11, 1991.
4. CECo submittal, F.G. Lentine to H.R. Denton dated July 27, 1983; entitled "Zion Stations Units 1 and 2, Byron Station Units 1 and 2, Braidwood Station Units 1 and 2, Commonwealth Edison Company Topical, Report on Benchmark of PWR Nuclear Design Methods," NRC Docket Nos. 50-295/304, 50-454/455, and 50-456/457.
5. NRC SER on CECo's Neutronics Topical dated December 13, 1983.
6. NRC Letter from S.P. Sands to T.J. Kovach, "Amendment No.23 - Use of VANTAGE 5 Fuel," dated April 19, 1990.
7. CECo submittal, S.C. Hunsader to T.E. Murley "Braidwood Stations Unit 1 and 2 Application to Facility Operating License NPF-72 and NPF-77," dated October 14, 1989.