

ATTACHMENT
OPERATING LIMIT REPORT (OLR)

K:\naibw\ATM051

8503140389 850309
PDR ADDCK 05000456
P PDR

BRAIDWOOD UNIT 1, CYCLE 5A

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} limit for RATED THERMAL POWER within specified core plans for Cycle 5A 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:

$$F_{xy}^{RTP} \leq 2.700$$

- 2) For all unrodded core planes:

$$F_{xy}^{RTP} \leq 1.755$$

- 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:

$$F_{xy}^{RTP} \leq 2.052$$

- 2) For all unrodded core planes:

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

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

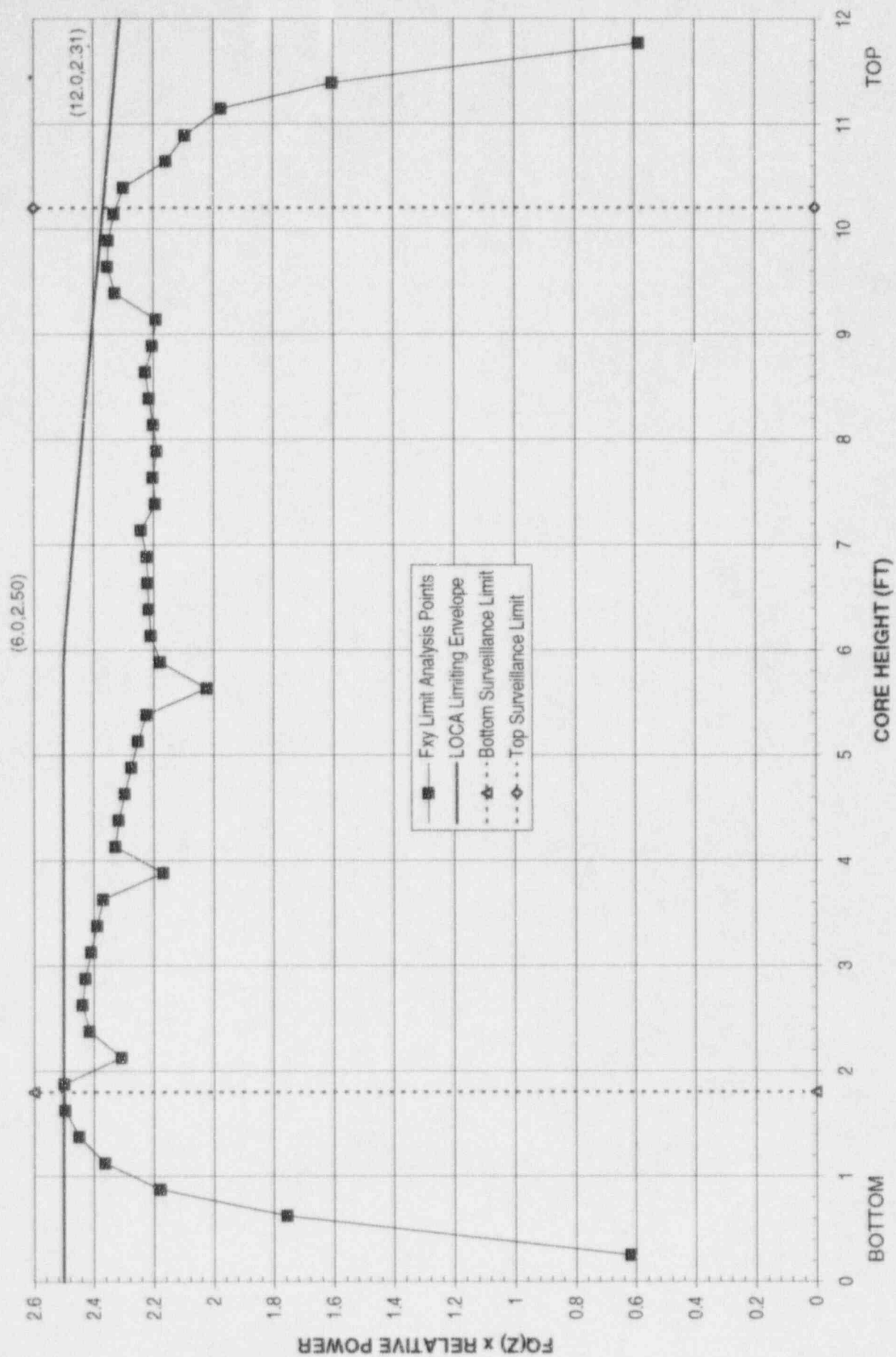
$$F_{Q(z)} \leq \left[\frac{2.50}{P} \right] [K(z)] \text{ for } P > 0.5 \text{ and}$$

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

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

Braidwood Unit 1 Cycle 5A FQ(Z) x P versus Core Height Fxy Limit Analysis



BR1C5A
FXY LIMIT EVALUATION

Summary of Fq vs. Core Height

Axial Position	Fq SPIL	
	Peak Fq	LIMIT
0.25038	0.6165	2.5
0.62594	1.7571	2.5
0.87632	2.1781	2.5
1.1267	2.3619	2.5
1.3771	2.4488	2.5
1.6275	2.4958	2.5
1.8778	2.4994	2.5
2.1282	2.3069	2.5
2.3786	2.4148	2.5
2.629	2.4362	2.5
2.8793	2.4287	2.5
3.1297	2.4097	2.5
3.3801	2.3884	2.5
3.6305	2.3677	2.5
3.8808	2.168	2.5
4.1312	2.3279	2.5
4.3816	2.316	2.5
4.632	2.2959	2.5
4.8824	2.2744	2.5
5.1327	2.2516	2.5
5.3831	2.2229	2.5
5.6335	2.0236	2.5
5.8839	2.1773	2.5
6.1342	2.2092	2.4957
6.3846	2.2157	2.4878
6.635	2.2197	2.4799
6.8854	2.2209	2.472
7.1358	2.2405	2.464
7.3861	2.1938	2.4561
7.6365	2.2013	2.4482
7.8869	2.1884	2.4402
8.1373	2.1962	2.4323
8.3876	2.2134	2.4244
8.638	2.2256	2.4165
8.8884	2.2034	2.4085
9.1388	2.1903	2.4006
9.3891	2.3273	2.3927
9.6395	2.3525	2.3847
9.8899	2.3492	2.3768
10.14	2.3308	2.3689
10.391	2.299	2.361
10.641	2.1572	2.353
10.891	2.094	2.3451
11.142	1.9728	2.3372
11.392	1.6042	2.3292
11.768	0.58717	2.3174

Shaded area shows surveillance region. Unshaded area (top and bottom 15%) is ignored for this surveillance.