Attachment 1

Proposed Modifications to the Power Distribution Limits Sections of the McGuire 1 Technical Specifications for Base Load Operation

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 AXIAL FLUX DIFFERENCE (UNIT 1)

LIMITING CONDITION FOR OPERATION

3.2.1 The indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within:
a. the allowed operational space defined by Figure 3.2-1x FOR RAOC OPERATION, OR
b. WITHIN A ± 3 PERCENT TARGET BAND ABOUT THE TARGET FLUX DIFFERENCE DURING BASE LOAD OPERATION.

APPLICABILITY: MODE 1 above 50% of RATED THERMAL POWER*.

ACTION:

a. FOR RAOC OPERATION With the indicated AFD outside of the Figure 3.2-1 limits,
   1. Either restore the indicated AFD to within the Figure 3.2-1 limits within 15 minutes, or
   2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes and reduce the Power Range Neutron Flux - High Trip setpoints to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.

b. (INSERT A)

c. ~~b~~. THERMAL POWER shall not be increased above 50% of RATED THERMAL POWER unless the indicated AFD is within the Figure 3.2-1 limits.

SURVEILLANCE REQUIREMENTS

4.2.1.1 The indicated AFD shall be determined to be within its limits during POWER OPERATION above 50% of RATED THERMAL POWER by:

a. Monitoring the indicated AFD for each OPERABLE excore channel:
   1. At least once per 7 days when the AFD Monitor Alarm is OPERABLE, and
   2. At least once per hour for the first 24 hours after restoring the AFD Monitoring Alarm to OPERABLE status.

b. Monitoring and logging the indicated AFD for each OPERABLE excore channel at least once per hour for the first 24 hours and at least once per 30 minutes thereafter, when the AFD Monitor Alarm is inoperable. The logged values of the indicated AFD shall be assumed to exist during the interval preceding each logging.

4.2.1.2 The indicated AFD shall be considered outside of its limits when at least two OPERABLE excore channels are indicating the AFD to be outside the limits.

4.2.1.3 }
4.2.1.4 } (INSERT B)

*See Special Test Exception 3.10.2.

** APL^{ND} IS THE MINIMUM ALLOWABLE POWER LEVEL FOR BASE LOAD OPERATION AND WILL BE PROVIDED IN THE PEAKING FACTOR LIMIT REPORT PER SPECIFICATION 6.9.1.9.

INSERT A

b. For Base Load operation above APL^{ND}** with the indicated AXIAL FLUX DIFFERENCE outside of the applicable target band about the target flux difference:

1. Either restore the indicated AFD to within the target band limits within 15 minutes, or

2. Reduce THERMAL POWER to less than APL^{ND} of RATED THERMAL POWER and discontinue Base Load operation within 30 minutes.

INSERT B

4.2.1.3 When in Base Load operation, the target axial flux difference of each OPERABLE excore channel shall be determined by measurement at least once per 92 Effective Full Power Days. The provisions of Specification 4.0.4 are not applicable.

4.2.1.4 When in Base Load operation, the target flux difference shall be updated at least once per 31 Effective Full Power Days by either determining the target flux difference pursuant to 4.2.1.3 above or by linear interpolation between the most recently measured value and 0 percent at the end of cycle life. The provisions of Specification 4.0.4 are not applicable.

NO CHANGES

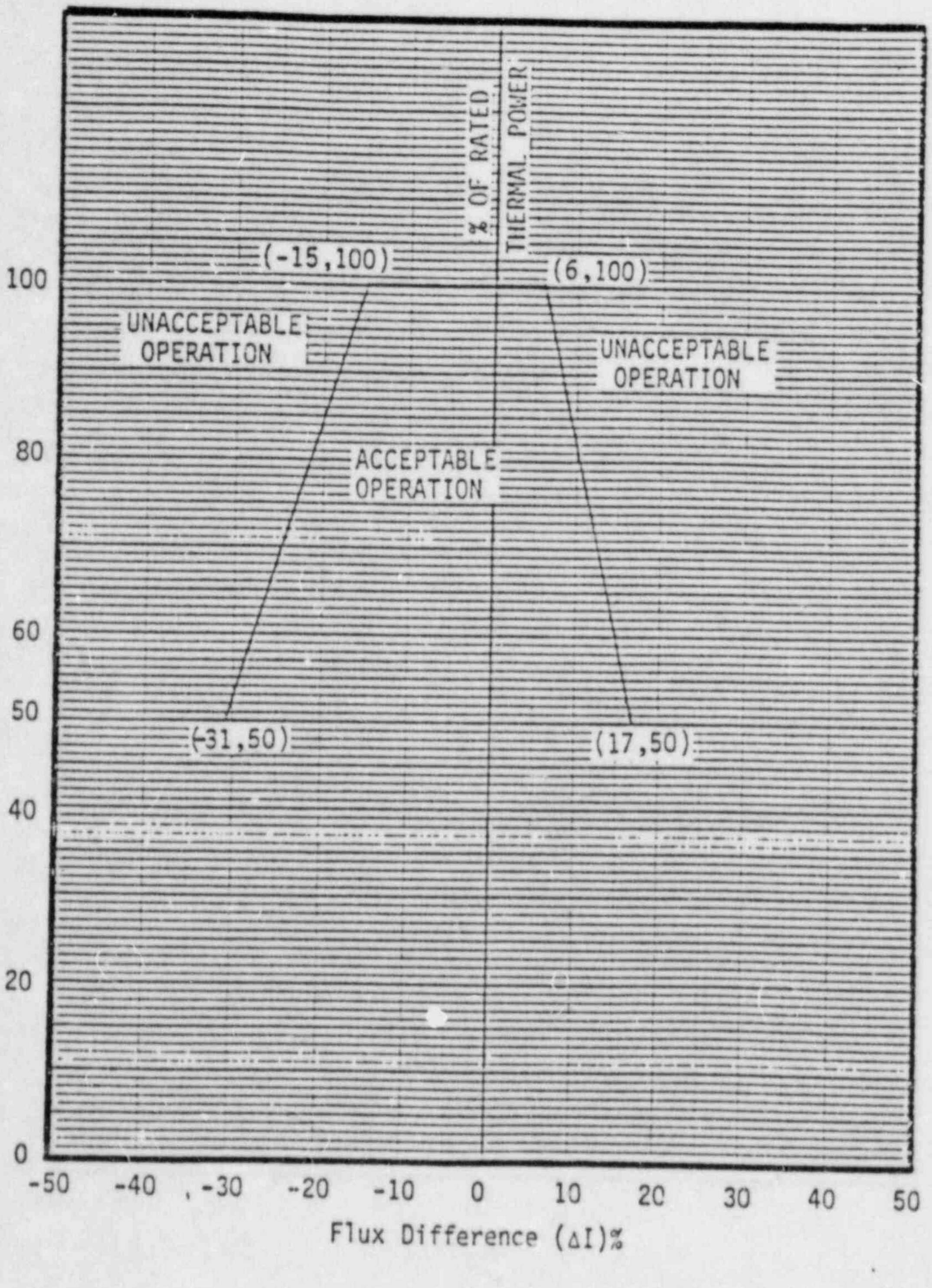

FIGURE 3.2-1a
AXIAL FLUX DIFFERENCE LIMITS AS A FUNCTION OF RATED THERMAL POWER (UNIT 1)

NO CHANGES

3/4.2.2 HEAT FLUX HOT CHANNEL FACTOR - $F_Q(Z)$

LIMITING CONDITION FOR OPERATION

3.2.2 $F_Q(Z)$ shall be limited by the following relationships:

$$F_Q(Z) \leq \frac{[2.32]}{P} [K(Z)] \text{ for } P > 0.5 \text{ (Unit 2)}$$

$$F_Q(Z) \leq \frac{[2.15]}{P} [K(Z)] \text{ for } P > 0.5 \text{ (Unit 1)}$$

$$F_Q(Z) \leq \frac{[2.32]}{0.5} [K(Z)] \text{ for } P \leq 0.5 \text{ (Unit 2)}$$

$$F_Q(Z) \leq \frac{[2.15]}{0.5} [K(Z)] \text{ for } P \leq 0.5 \text{ (Unit 1)}$$

Where: $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$,

and K(Z) is the function obtained from Figure 3.2-2 for a given core height location.

APPLICABILITY: MODE 1.

ACTION:

With $F_Q(Z)$ exceeding its limit:

a. Reduce THERMAL POWER at least 1% for each 1% $F_Q(Z)$ exceeds the limit within 15 minutes and similarly reduce the Power Range Neutron Flux-High Trip Setpoints within the next 4 hours; POWER OPERATION may proceed for up to a total of 72 hours; subsequent POWER OPERATION may proceed provided the Overpower Delta T Trip Setpoints (value of K_4) have been reduced at least 1% (in ΔT span) for each 1% $F_Q(Z)$ exceeds the limit; and

b. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced limit required by ACTION a., above; THERMAL POWER may then be increased provided $F_Q(Z)$ is demonstrated through incore mapping to be within its limit.

SURVEILLANCE REQUIREMENTS (UNIT 1)

4.2.2.1 The provisions of Specification 4.0.4 are not applicable.

4.2.2.2 FOR RAOC OPERATION, $F_Q(z)$ shall be evaluated to determine if $F_Q(z)$ is within its limit by:

a. Using the movable incore detectors to obtain a power distribution map at any THERMAL POWER greater than 5% of RATED THERMAL POWER.

b. Increasing the measured $F_Q(z)$ component of the power distribution map by 3% to account for manufacturing tolerances and further increasing the value by 5% to account for measurement uncertainties.

c. Satisfying the following relationship:

$$F_Q^M(z) \leq \frac{2.15 \quad x\ K(z)}{P\ x\ W(z)} \text{ for } P > 0.5$$

$$F_Q^M(z) < \frac{2.15 \quad x\ K(z)}{W(z)\ x\ 0.5} \text{ for } P \leq 0.5$$

where $F_Q^M(z)$ is the measured $F_Q(z)$ increased by the allowances for manufacturing tolerances and measurement uncertainty, 2.15 is the F_Q limit, K(z) is given in Figure 3.2-2, P is the relative THERMAL POWER, and W(z) is the cycle dependent function that accounts for power distribution transients encountered during normal operation. This function is given in the Peaking Factor Limit Report as per Specification 6.9.1.9.

d. Measuring $F_Q^M(z)$ according to the following schedule:

1. Upon achieving equilibrium conditions after exceeding by 10% or more of RATED THERMAL POWER, the THERMAL POWER at which $F_Q(z)$ was last determined,* or

2. At least once per 31 Effective Full Power Days, whichever occurs first.

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*During power escalation at the beginning of each cycle, power level may be increased until a power level for extended operation has been achieved and a power distribution map obtained.

SURVEILLANCE REQUIREMENTS (UNIT 1) (Continued)

e. With measurements indicating

$$\underset{\text{over } z}{\text{maximum}} \left(\frac{F_Q^M(z)}{K(z)} \right)$$

has increased since the previous determination of $F_Q^M(z)$ either of the following actions shall be taken:

1) $F_Q^M(z)$ shall be increased by 2% over that specified in Specification 4.2.2.2c. or

2) $F_Q^M(z)$ shall be measured at least once per 7 Effective Full Power Days until two successive maps indicate that

$$\underset{\text{over } z}{\text{maximum}} \left(\frac{F_Q^M(z)}{K(z)} \right) \text{ is not increasing.}$$

f. With the relationships specified in Specification 4.2.2.2c. above not being satisfied:

1) Calculate the percent $F_Q(z)$ exceeds its limit by the following expression:

$$\left\{ \left(\underset{\text{over } z}{\text{maximum}} \left[\frac{F_Q^M(z) \times W(z)}{\frac{2.15}{P} \times K(z)} \right] \right) - 1 \right\} \times 100 \quad \text{for } P \geq 0.5$$

$$\left\{ \left(\underset{\text{over } z}{\text{maximum}} \left[\frac{F_Q^M(z) \times W(z)}{\frac{2.15}{0.5} \times K(z)} \right] \right) - 1 \right\} \times 100 \quad \text{for } P < 0.5$$

2) ~~Either~~ ONE of the following actions shall be taken:

a) Within 15 minutes, control the AFD to within new AFD limits which are determined by reducing the AFD limits of 3.2-1 by 1% AFD for each percent $F_Q(z)$ exceeds its limits as determined in Specification 4.2.2.2f.1). Within 8 hours, reset the AFD alarm setpoints to these modified limits, or

b) Comply with the requirements of Specification 3.2.2 for $F_Q(z)$ exceeding its limit by the percent calculated above, OR

c) VERIFY THAT THE REQUIREMENTS OF SPECIFICATION 4.2.2.3 FOR BASE LOAD OPERATION ARE SATISFIED AND ENTER BASE LOAD OPERATION.

SURVEILLANCE REQUIREMENTS (UNIT 1) (Continued)

g. The limits specified in Specifications 4.2.2.2c, 4.2.2.2e., and 4.2.2.2f. above are not applicable in the following core plane regions:

1. Lower core region from 0 to 15%, inclusive.

2. Upper core region from 85 to 100%, inclusive.

4.2.2.3 5 When $F_Q(Z)$ is measured for reasons other than meeting the requirements of Specification 4.2.2.2 an overall measured $F_Q(z)$ shall be obtained from a power distribution map and increased by 3% to account for manufacturing tolerances and further increased by 5% to account for measurement uncertainty.

4.2.2.3
4.2.2.4 } INSERT C

4.2.2.3 Base Load operation is permitted at powers above APL^{ND} if the following conditions are satisfied:

a. Prior to entering Base Load operation, maintain THERMAL POWER above APL^{ND} and less than or equal to that allowed by Specification 4.2.2.2 for at least the previous 24 hours. Maintain Base Load operation surveillance (AFD within ± 3% of target flux difference) during this time period. Base Load operation is then permitted providing THERMAL POWER is maintained between APL^{ND} and APL^{BL} or between APL^{ND} and 100% (whichever is most limiting) and F_Q surveillance is maintained pursuant to Specification 4.2.2.4. APL^{BL} is defined as:

$$APL^{BL} = \underset{\text{over } Z}{\text{minimum}} \left[\frac{(2.15) \times K(Z)}{F_Q^M(Z) \times W(Z)_{BL}} \right] \times 100\%$$

where: $F_Q^M(z)$ is the measured $F_Q(z)$ increased by the allowances for manufacturing tolerances and measurement uncertainty. The F_Q limit is 2.15. $K(z)$ is given in Figure 3.2-2. $W(z)_{BL}$ is the cycle dependent function that accounts for limited power distribution transients encountered during base load operation. The function is given in the Peaking Factor Limit Report as per Specification 6.9.1.9.

b. During Base Load operation, if the THERMAL POWER is decreased below APL^{ND} then the conditions of 4.2.2.3.a shall be satisfied before re-entering Base Load operation.

4.2.2.4 During Base Load Operation $F_Q(Z)$ shall be evaluated to determine if $F_Q(Z)$ is within its limit by:

a. Using the movable incore detectors to obtain a power distribution map at any THERMAL POWER above APL^{ND}.

b. Increasing the measured $F_Q(Z)$ component of the power distribution map by 3% to account for manufacturing tolerances and further increasing the value by 5% to account for measurement uncertainties.

INSERT C (PAGE 2 OF 3)

c. Satisfying the following relationship:

$$F_Q^M(Z) \leq \frac{2.15 \times K(Z)}{P \times W(Z)_{BL}} \text{ for } P > APL^{ND}$$

where: $F_Q^M(Z)$ is the measured $F_Q(Z)$. The F_Q limit is 2.15. K(Z) is given in Figure 3.2-2. P is the relative THERMAL POWER. $W(Z)_{BL}$ is the cycle dependent function that accounts for limited power distribution transients encountered during normal operation. This function is given in the Peaking Factor Limit Report as per Specification 6.9.1.9.

d. Measuring $F_Q^M(Z)$ in conjunction with target flux difference determination according to the following schedule:

1. Prior to entering BASE LOAD operation after satisfying Section 4.2.2.3 unless a full core flux map has been taken in the previous 31 EFPD with the relative thermal power having been maintained above APL^{ND} for the 24 hours prior to mapping, and

2. At least once per 31 effective full power days.

e. With measurements indicating

$$\underset{\text{over } Z}{\text{maximum}} \left[\frac{F_Q^M(Z)}{K(Z)} \right]$$

has increased since the previous determination $F_Q^M(Z)$ either of the following actions shall be taken:

1. $F_Q^M(Z)$ shall be increased by 2 percent over that specified in 4.2.2.4.c, or

INSERT C (PAGE 3 OF 3)

2. $F_Q^M(Z)$ shall be measured at least once per 7 EFPD until 2 successive maps indicate that

$$\underset{\text{over } z}{\text{maximum}} \left[\frac{F_Q^M(Z)}{K(Z)} \right] \text{ is not increasing.}$$

f. With the relationship specified in 4.2.2.4.c above not being satisfied, either of the following actions shall be taken:

1. Place the core in an equilbrium condition where the limit in 4.2.2.2.c is satisfied, and remeasure $F_Q^M(Z)$, or

2. Comply with the requirements of Specification 3.2.2 for $F_Q(Z)$ exceeding its limit by the percent calculated with one of the following expressions:

$$\left[\left(\text{max. over z of } \left[\frac{F_Q^M(Z) \times W(Z)_{BL}}{\frac{2.15}{P} \times K(Z)} \right]\right) - 1 \right] \times 100 \quad \text{for } P \geq APL^{ND}$$

$$\left[\left(\text{max. over z of } \left[\frac{F_Q^M(Z) \times W(z)}{\frac{2.15}{P} \times K(Z)} \right]\right) - 1 \right] \times 100 \quad \text{for } 0.5 \leq P < APL^{ND}$$

g. The limits specified in 4.2.2.4.c, 4.2.2.4.e, and 4.2.2.4.f above are not applicable in the following core plan regions:

1. Lower core region 0 to 15 percent, inclusive.

2. Upper core region 85 to 100 percent, inclusive.

NO CHANGES

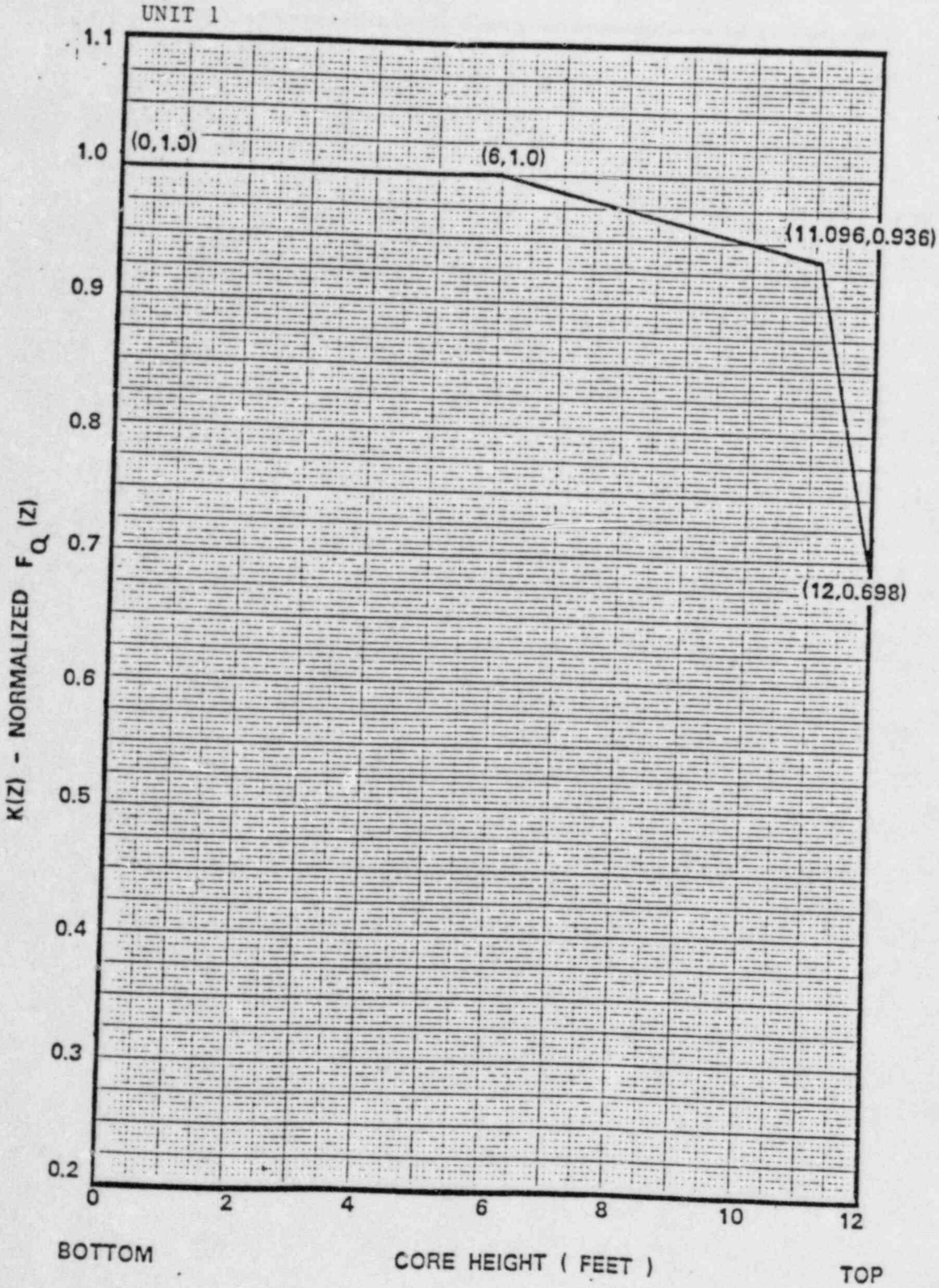


FIGURE 3.2-2a
K(Z) - NORMALIZED $F_Q(Z)$ AS A FUNCTION OF CORE HEIGHT (UNIT 1)

BASES

The specifications of this section provide assurance of fuel integrity during Condition I (Normal Operation) and II (Incidents of Moderate Frequency) events by: (1) maintaining the calculated DNBR in the core at or above the design limit during normal operation and in short-term transients, and (2) limiting the fission gas release, fuel pellet temperature, and cladding mechanical properties to within assumed design criteria. In addition, limiting the peak linear power density during Condition I events provides assurance that the initial conditions assumed for the LOCA analyses are met and the ECCS acceptance criteria limit of 2200°F is not exceeded.

The definitions of certain hot channel and peaking factors as used in these specifications are as follows:

$F_Q(Z)$ Heat Flux Hot Channel Factor, is defined as the maximum local heat flux on the surface of a fuel rod at core elevation Z divided by the average fuel rod heat flux, allowing for manufacturing tolerances on fuel pellets and rods;

$F^N_{\Delta H}$ Nuclear Enthalpy Rise Hot Channel Factor, is defined as the ratio of the integral of linear power along the rod with the highest integrated power to the average rod power; and

Unit No. 2

$F_{xy}(Z)$ Radial Peaking Factor, is defined as the ratio of peak power density to average power density in the horizontal plane at core elevation Z.

3/4.2.1 AXIAL FLUX DIFFERENCE

The limits on AXIAL FLUX DIFFERENCE (AFD) assure that the $F_Q^{(Z)}$ upper bound envelope of 2.32 (Unit 2), 2.15 (Unit 1) times the normalized axial peaking factor is not exceeded during either normal operation or in the event of xenon redistribution following power changes.

~~Unit No. 2~~

Target flux difference is determined at equilibrium xenon conditions. The full-length rods may be positioned within the core in accordance with their respective insertion limits and should be inserted near their normal position for steady-state operation at high power levels. The value of the target flux difference obtained under these conditions divided by the fraction of RATED THERMAL POWER is the target flux difference at RATED THERMAL POWER for the associated core burnup conditions. Target flux differences for other THERMAL POWER levels are obtained by multiplying the RATED THERMAL POWER value by the appropriate fractional THERMAL POWER level. The periodic updating of the target flux difference value is necessary to reflect core burnup considerations.

AXIAL FLUX DIFFERENCE (Continued)

Unit No. 2

Although it is intended that the plant will be operated with the AFD within the target band required by Specification 3.2.1 about the target flux difference, during rapid plant THERMAL POWER reductions, control rod motion will cause the AFD to deviate outside of the target band at reduced THERMAL POWER levels. This deviation will not affect the xenon redistribution sufficiently to change the envelope of peaking factors which may be reached on a subsequent return to RATED THERMAL POWER (with the AFD within the target band) provided the time duration of the deviation is limited. Accordingly, a 1 hour penalty deviation limit cumulative during the previous 24 hours is provided for operation outside of the target band but within the limits of Figure 3.2-1 while at THERMAL POWER levels between 50% and 90% of RATED THERMAL POWER. For THERMAL POWER levels between 15% and 50% of RATED THERMAL POWER, deviations of the AFD outside of the target band are less significant. The penalty of 2 hours actual time reflects this reduced significance.

Provisions for monitoring the AFD on an automatic basis are derived from the plant process computer through the AFD Monitor Alarm. The computer determines the 1 minute average of each of the OPERABLE excore detector outputs and provides an alarm message immediately if the AFD for two or more OPERABLE excore channels are outside the target band and the THERMAL POWER is greater than 90% of RATED THERMAL POWER. During operation at THERMAL POWER levels between 50% and 90% and between 15% and 50% RATED THERMAL POWER, the computer outputs an alarm message when the penalty deviation accumulates beyond the limits of 1 hour and 2 hours, respectively.

Figure B 3/4 2-1 shows a typical monthly target band.

INSERT D

~~Unit No. 1~~

~~For Unit 1, the computer determines the minute average of each of the OPERABLE excore detector outputs and provides an alarm message immediately if the AFD for at least 2 of 4 or 2 of 3 OPERABLE excore channels are outside the allowed ΔI-Power operating space and the THERMAL POWER is greater than 50% of RATED THERMAL POWER.~~

3/4.2.2 and 3/4.2.3 HEAT FLUX HOT CHANNEL FACTOR, and RCS FLOW RATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR

The limits on heat flux hot channel factor, RCS flow rate, and nuclear enthalpy rise hot channel factor ensure that: (1) the design limits on peak local power density and minimum DNBR are not exceeded, and (2) in the event of a LOCA the peak fuel clad temperature will not exceed the 2200°F ECCS acceptance criteria limit.

Each of these is measurable but will normally only be determined periodically as specified in Specifications 4.2.2 and 4.2.3. This periodic surveillance is sufficient to insure that the limits are maintained provided:

INSERT D

Unit No. 1

For Unit 1, at power levels below APL^{ND}, the limits on AFD are defined by Figure 3.2-1, i.e. that defined by the RAOC operating procedure and limits. These limits were calculated in a manner such that expected operational transients, e.g. load follow operations, would not result in the AFD deviating outside of those limits. However, in the event such a deviation occurs, the short period of time allowed outside of the limits at reduced power levels will not result in significant xenon redistribution such that the envelope of peaking factors would change sufficiently to prevent operation in the vicinity of the APL^{ND} power level.

At power levels greater than APL^{ND}, two modes of operation are permissible; 1) RAOC, the AFD limit of which are defined by Figure 3.2-1, and 2) Base Load operation, which is defined as the maintainence of the AFD within a ±3% band about a target value. The RAOC operating procedure above APL^{ND} is the same as that defined for operation below APL^{ND}. However, it is possible when following extended load following maneuvers that the AFD limits may result in restrictions in the maximum allowed power or AFD in order to guarantee operation with $F_Q(z)$ less than it's limiting value. To allow operation at the maximum permissible value, the Base Load operating procedure restricts the indicated AFD to relatively small target band and power swings (AFD target band of ±3%, $APL^{ND} \leq$ power $\leq APL^{BL}$ or 100% Rated Thermal Power, whichever is lower). For Base Load operation, it is expected that the plant will operate within the target band. Operation outside of the target band for the short time period allowed will not result in significant xenon redistribution such that the envelope of peaking factors would change sufficiently to prohibit continued operation in the power region defined above. To assure there is no residual xenon redistribution impact from past operation on the Base Load operation, a 24 hour waiting period at a power level above APL^{ND} and allowed by RAOC is necessary. During this time period load changes and rod motion are restricted to that allowed by the Base Load procedure. After the waiting period extended Base Load operation is permissible.

For Unit 1, the computer determines the ONE minute average of each of the OPERABLE excore detector outputs and provides an alarm message immediately if the AFD for at least 2 of 4 or 2 of 3 OPERABLE excore channels are: 1) outside the allowed ΔI power operating space (for RAOC operation), or 2) outside the allowed ΔI target band (for Base Load operation). These alarms are active when power is greater than: 1) 50% of RATED THERMAL POWER (for RAOC operation), or 2) APL^{ND} (for Base Load operation). Penalty deviation minutes for Base Load operation are not accumulated based on the short period of time during which operation outside of the target band is allowed.

NO CHANGES

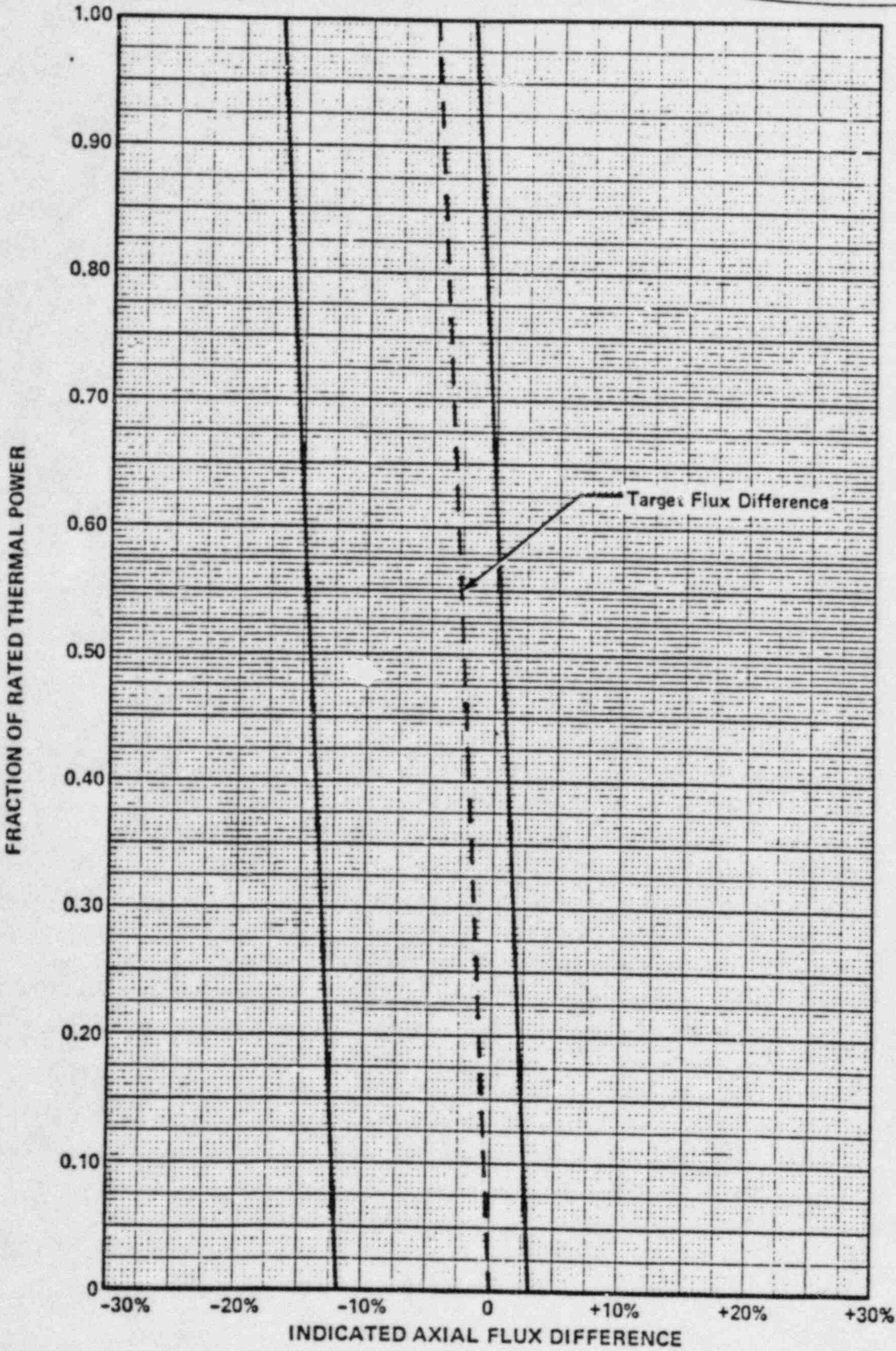


FIGURE B 3/4 2-1.

TYPICAL INDICATED AXIAL FLUX DIFFERENCE VERSUS THERMAL POWER

NO CHANGES

HEAT FLUX HOT CHANNEL FACTOR, and RCS FLOW RATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR (Continued)

a. Control rods in a single group move together with no individual rod insertion differing by more than ± 13 steps from the group demand position;

b. Control rod groups are sequenced with overlapping groups as described in Specification 3.1.3.6;

c. The control rod insertion limits of Specifications 3.1.3.5 and 3.1.3.6 are maintained; and

d. The axial power distribution, expressed in terms of AXIAL FLUX DIFFERENCE, is maintained within the limits.

$F^N_{\Delta H}$ will be maintained within its limits provided Conditions a. through d. above are maintained. As noted on Figures 3.2-3 and 3.2-4, RCS flow rate and $F^N_{\Delta H}$ may be "traded off" against one another (i.e., a low measured RCS flow rate is acceptable if the measured $F^N_{\Delta H}$ is also low) to ensure that the calculated DNBR will not be below the design DNBR value. The relaxation of $F^N_{\Delta H}$ as a function of THERMAL POWER allows changes in the radial power shape for all permissible rod insertion limits.

R_1 as calculated in Specification 3.2.3 and used in Figure 3.2-3, accounts for $F^N_{\Delta H}$ less than or equal to 1.49. This value is used in the various accident analyses where $F^N_{\Delta H}$ influences parameters other than DNBR, e.g., peak clad temperature, and thus is the maximum "as measured" value allowed. R_2, as defined, allows for the inclusion of a penalty for Rod Bow on DNBR only. Thus, knowing the "as measured" values of $F^N_{\Delta H}$ and RCS flow allows for "tradeoffs" in excess of R equal to 1.0 for the purpose of offsetting the Rod Bow DNBR penalty.

Fuel rod bowing reduces the value of DNB ratio. Credit is available to partially offset this reduction. This credit comes from a generic or plant-specific design margin. For McGuire Unit 2, the margin used to partially offset rod bow penalties is 9.1%. This margin breaks down as follows:

1)	Design limit DNBR	1.6%
2)	Grid spacing K_s	2.9%
3)	Thermal Diffusion Coefficient	1.2%
4)	DNBR Multiplier	1.7%
5)	Pitch Reduction	1.7%

HEAT FLUX HOT CHANNEL FACTOR and RCS FLOW RATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR (Continued)

However, the margin used to partially offset rod bow penalties is 5.9% with the remaining 3.2% used to trade off against measured flow being as much as 2% lower than thermal design flow plus uncertainties. The penalties applied to $F^N_{\Delta H}$ to account for rod bow (Figure 3.2-4) as a function of burnup are consistent with those described in Mr. John F. Stolz's (NRC) letter to T. M. Anderson (Westinghouse) dated April 5, 1979 with the difference being due to the amount of margin each unit uses to partially offset rod bow penalties.

For McGuire Unit 1, margin between the safety analysis limit DNBRs (1.47 and 1.49 for thimble and typical cells, respectively) and the design limit DNBRs (1.32 and 1.34 for thimble and typical cells, respectively) is maintained. A fraction of this margin is utilized to accommodate the transition core DNBR penalty (2%) and the appropriate fuel rod bow DNBR penalty (WCAP - 8691, Rev. 1)

When an F_Q measurement is taken, an allowance for both experimental error and manufacturing tolerance must be made. An allowance of 5% is appropriate for a full-core map taken with the Incore Detector Flux Mapping System, and a 3% allowance is appropriate for manufacturing tolerance.

When RCS flow rate and $F^N_{\Delta H}$ are measured, no additional allowances are necessary prior to comparison with the limits of Figures 3.2-3 and 3.2-4. Measurement errors of 1.7% for RCS total flow rate and 4% for $F^N_{\Delta H}$ have been allowed for in determination of the design DNBR value.

The measurement error for RCS total flow rate is based upon performing a precision heat balance and using the result to calibrate the RCS flow rate indicators. Potential fouling of the feedwater venturi which might not be detected could bias the result from the precision heat balance in a non-conservative manner. Therefore, a penalty of 0.1% for undetected fouling of the feedwater venturi is included in Figure 3.2-3. Any fouling which might bias the RCS flow rate measurement greater than 0.1% can be detected by monitoring and trending various plant performance parameters. If detected, action shall be taken before performing subsequent precision heat balance measurements, i.e., either the effect of the fouling shall be quantified and compensated for in the RCS flow rate measurement or the venturi shall be cleaned to eliminate the fouling.

The 12-hour periodic surveillance of indicated RCS flow is sufficient to detect only flow degradation which could lead to operation outside the acceptable region of operation shown on Figure 3.2-3.

HEAT FLUX HOT CHANNEL FACTOR and RCS FLOW RATE AND NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR (Continued)

INSERT E

The hot channel factor $F_Q^M(z)$ is measured periodically and increased by a cycle and height dependent power factor, W(Z), to provide assurance that the limit on the hot channel factor, $F_Q(z)$, is met. W(z) accounts for the effects of normal operation transients and was determined from expected power control maneuvers over the full range of burnup conditions in the core. The W(z) function for normal operation is provided in the Peaking Factor Limit Report per Specification 6.9.1.9.

3/4.2.4 QUADRANT POWER TILT RATIO

The QUADRANT POWER TILT RATIO limit assures that the radial power distribution satisfies the design values used in the power capability analysis. Radial power distribution measurements are made during STARTUP testing and periodically during power operation.

The 2-hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned rod. In the event such action does not correct the tilt, the margin for uncertainty on F_Q is reinstated by reducing the power by 3% from RATED THERMAL POWER for each percent of tilt in excess of 1.0.

For purposes of monitoring QUADRANT POWER TILT RATIO when one excore detector is inoperable, the moveable incore detectors are used to confirm that the normalized symmetric power distribution is consistent with the QUADRANT POWER TILT RATIO. The incore detector monitoring is done with a full incore flux map or two sets of four symmetric thimbles. The two sets of four symmetric thimbles is a unique set of eight detector locations. These locations are C-8, E-5, E-11, H-3, H-13, L-5, L-11, N-8.

3/4.2.5 DNB PARAMETERS

The limits on the DNB-related parameters assure that each of the parameters are maintained within the normal steady-state envelope of operation assumed in the transient and accident analyses. The limits are consistent with the initial FSAR assumptions and have been analytically demonstrated adequate to maintain a design limit DNBR throughout each analyzed transient.

The 12-hour periodic surveillance of these parameters through instrument readout is sufficient to ensure that the parameters are restored within their limits following load changes and other expected transient operation.

INSERT E

The hot channel factor $F_Q^M(z)$ is measured periodically and increased by a cycle and height dependent power factor appropriate to either RAOC or Base Load operation, $W(z)$ or $W(z)_{BL}$, to provide assurance that the limit on the hot channel factor, $F_Q(z)$, is met. $W(z)$ accounts for the effects of normal operation transients and was determined from expected power control maneuvers over the full range of burnup conditions in the core. $W(z)_{BL}$ accounts for the more restrictive operating limits allowed by Base Load operation which result in less severe transient values. The $W(z)$ function for normal operation is provided in the Peaking Factor Limit Report per Specification 6.9.1.9.

RADIAL PEAKING FACTOR LIMIT REPORT

Unit No. 2

6.9.1.9 The F_{xy} limit for RATED THERMAL POWER (F_{xy}^{RTP}) shall be provided to the Regional Administrator of the NRC Regional Office, with a copy to the Director, Nuclear Reactor Regulation, Attention: Chief, Core Performance Branch, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555 for all core planes containing Bank "D" control rods and all unrodded core planes at least 60 days prior to cycle initial criticality. In the event that the limit would be submitted at some other time during core life, it shall be submitted 60 days prior to the date the limit would become effective unless otherwise exempted by the Commission.

Any information needed to support F_{xy}^{RTP} will be by request from the NRC and need not be included in this report.

Unit No. 1

The W(z) functions for ~~normal~~ RAOC AND BASE LOAD operation AND THE VALUE FOR APL^{ND} (AS REQUIRED) shall be provided to the Director, Nuclear Reactor Regulations, Attention: Chief, Core Performance Branch, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 at least 60 days prior to cycle initial criticality. In the event that these values would be submitted at some other time during core life, it will be submitted 60 days prior to the date the values would become effective unless otherwise exempted by the Commission.

Any information needed to support W(z), $W(z)_{BL}$, AND APL^{ND} will be by request from the NRC and need not be included in this report.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the NRC Regional Office within the time period specified for each report.

Attachment 2
Justification and Safety Analysis

The McGuire Unit 1 Cycle 2 Zero Power Physics Testing was performed April 27 through May 4, 1984. During the low power flux mapping a 7.5% quadrant power tilt was identified. Additional rod swap measurements were performed to evaluate the possibility of dropped control rods or broken rodlets. A review of the core loading videotape was also made. No cause for the tilt has been identified. All zero power physics parameters met acceptance criteria except the all rods out hot zero power critical boron concentration and the radial power distribution. A review of the hot zero power results was performed by Westinghouse before commencing power escalation.

Power escalation was performed consistent with the Westinghouse position statement on core tilt. Safety evaluations were performed for the next power level plateau based on measured results of the current plateau. At 100% full power the measured incore quadrant power tilt decreased to 1.9% and the measured power distribution met acceptance criteria; however, the power in the peripheral fuel assemblies remained higher than predicted.

Due to the quadrant power tilt and the in-out shift in power distribution the measured $F_{\Delta H}$ and F_Q were higher than predicted but still less than the Technical Specification limits. After taking a flux map on June 6, 1984 it was determined that $F_Q^m(z) * W(z)$ exceeded the limit (2.15) by approximately 11% forcing a reduction in the RAOC limits (AFD limits crossed at a maximum rated thermal power of 96%) such that unit operation is effectively restricted to 95% full power. Design predictions indicate that no improvement in $F_Q^m(z) * W(z)$ or $F_{\Delta H}$ is expected within at least the next thirty to sixty effective full power days (EFPD). In fact, further increases in $F_Q^m(z) * W(z)$ or $F_{\Delta H}$ may lead to further reductions in reactor power level.

The RAOC W(z) functions account for power peaking increases resulting from power maneuvering within the allowed RAOC Power-AFD limits and do not allow credit to be taken for near steady state xenon distributions occurring during Base Load Operation. Because of the wide RAOC limits the corresponding W(z)'s are large. The proposed base load Technical Specification amendment imposes a tight ±3% AFD band about the target axial flux difference, a twenty-four hour equilibrium xenon hold, and limits on upper and lower power levels to ensure that no significant xenon transients can take place. The corresponding $W(z)_{BL}$ are therefore significantly reduced when compared to the RAOC W(z) values (as shown in the attached McGuire Unit 1 Cycle 2 Peaking Factor Limit Report for RAOC and Base Load Operation).

Operation under the revised Technical Specification will essentially be RAOC between 0% full power and the maximum power level allowed by the RAOC Technical Specification. Should the maximum power level allowed by the RAOC Technical Specification be less than 100% full power or if the RAOC AFD band width is less than 6% and the other conditions for Base Load Operation are met, then the plant would be allowed to switch to Base Load Operation.

The expected benefits in $F_Q^m(z) * W(z)_{BL}$ will be higher allowed power levels (the unit will be able to return to full power), and a ±3% AFD band about a measured target to operate in instead of the single operating point caused by decreased RAOC limits (i.e., easier operation at power levels near peak power allowed by RAOC). In addition, the proposed amendment would prevent further derating of the unit which is possible without the new specifications.

The Reload Safety Evaluation for McGuire 1 Cycle 2 ensures safe operation for all power levels including hot full power with RAOC operation. Westinghouse has performed the necessary nuclear design analysis to evaluate Base Load Operation for McGuire 1 Cycle 2. A safety evaluation was performed by Westinghouse to address the impact of Base Load Operation on plant safety. Since the limits for Base Load Operation are a subset of the RAOC limits and maintain the same initial conditions assumed for the transient safety analysis, operation in this mode was concluded to have no effect on the plant safety analysis. F_Q during Base Load Operation will be determined and an allowed power level defined as required.

Attachment 1 provides copies of the power distribution limits Technical Specifications as they presently appear in the McGuire Units 1 and 2 Technical Specifications with the appropriate changes necessary to expand them to include both RAOC and Base Load Operation noted. Additionally, changes to the corresponding Bases and administrative sections of the specifications are also included.

Attachment 2A is the Peaking Factor Limit Report which is provided in accordance with the proposed specification 6.9.1.9 as given in Attachment 1. The report's content has been amended to provide information which permits the exact determination of W(z) versus core height as a function of cycle burnup through the use of three point interpolation of three sets of burnup specific data. The report provides the elevation dependent W(z) values that are to be used as inputs to define the appropriate fitting coefficients for W(z) interpolations to be performed as a function of cycle burnup and axial elevation for RAOC and Base Load Operation, and the value for APL^{ND}. The appropriate W(z) function is used to confirm that the Heat Flux Hot Channel Factor, $F_Q(z)$, will be limited to the values specified in the Technical Specifications.

Attachment 2A

McGuire Unit 1 Cycle 2 Peaking Factor Limit Report for RAOC and Base Load Operation

PEAKING FACTOR LIMIT REPORT FOR MCGUIRE UNIT 1 CYCLE 2
RAOC OPERATION

This Peaking Factor Limit Report is provided in accordance with Paragraph 6.9.1.9 of the McGuire Unit 1 Technical Specifications.

The McGuire Unit 1, Cycle 2 elevation dependent W(z) values for RAOC operation at beginning, middle, and near end-of-life are shown in Figures 1 through 3 respectively. This information is sufficient to determine W(z) versus core height for Cycle 2 burnups in the range of 0 MWD/MTU to 10200 MWD/MTU through the use of three point interpolation. W(z) was calculated using the method described in Part B of Reference 1.

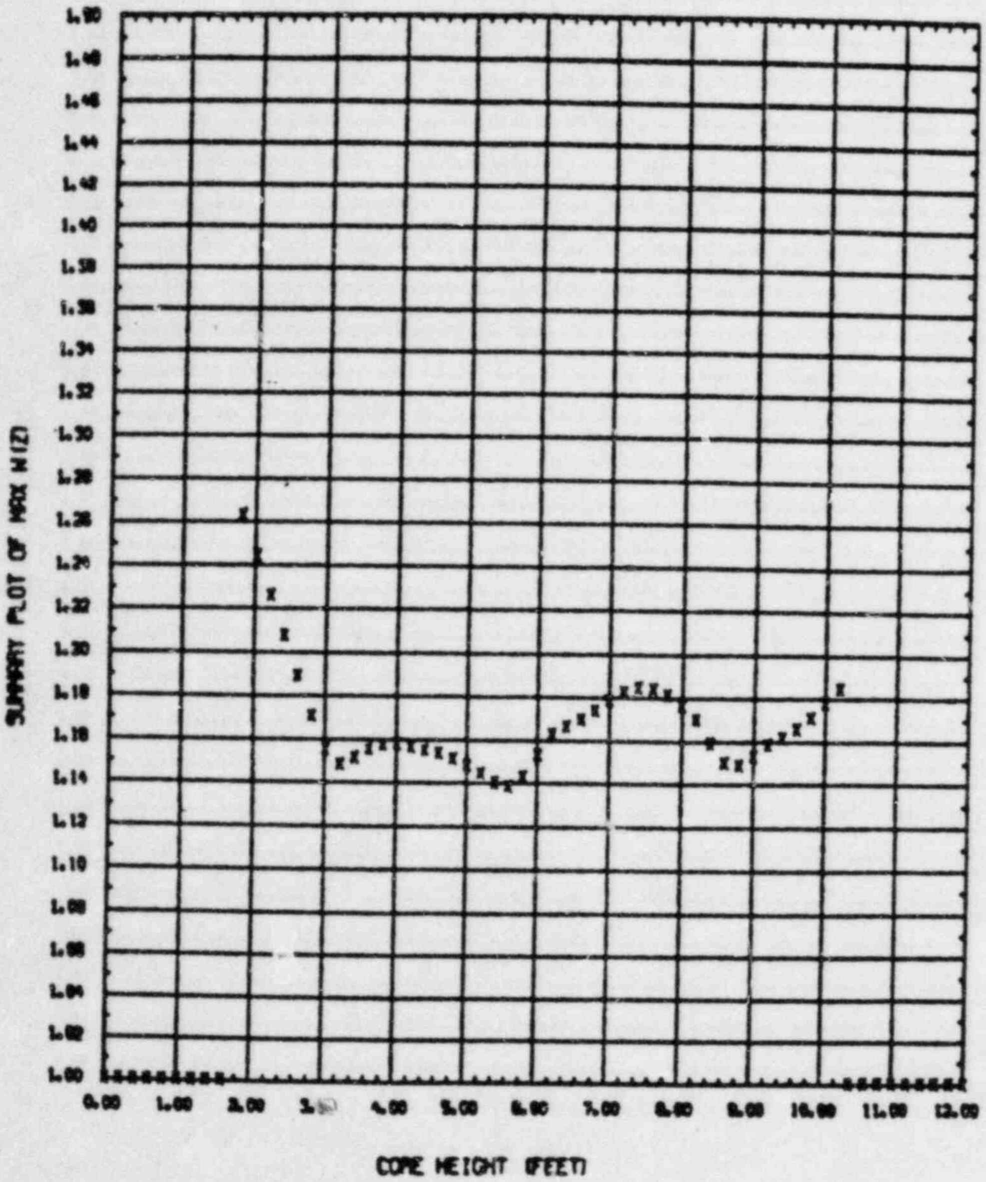
The appropriate W(z) function is used to confirm that the heat flux hot channel factor, $F_Q(z)$, will be limited to the Technical Specification values of:

$$F_Q(z) \leq \frac{2.15}{P} [K(z)] \text{ for } P > 0.50 \text{ and}$$

$$F_Q(z) \leq 4.30 [K(z)] \text{ for } P \leq 0.50$$

The appropriate elevation dependent W(z) values, when applied to a power distribution measured under equilibrium conditions, demonstrates that the initial conditions assumed in the LOCA are met, along with the ECCS acceptance criteria of 10CFR50.46.

(1) WCAP-10216-P-A, Relaxation of Constant Axial Control - F_Q Surveillance Technical Specification



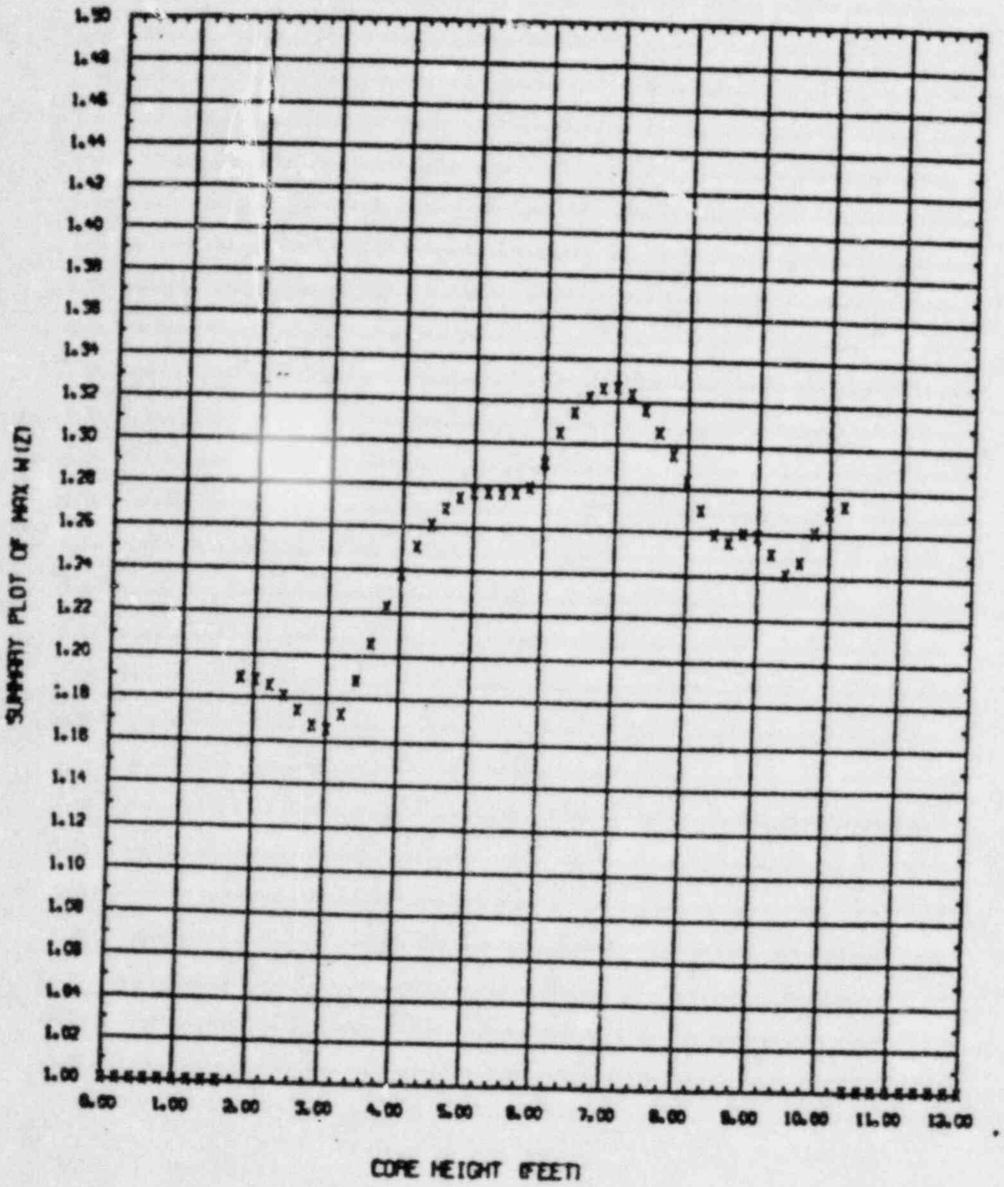
HEIGHT (FEET)	MAX W(Z)
0.00	1.000 *
.20	1.000 *
.40	1.000 *
.60	1.000 *
.80	1.000 *
1.00	1.000 *
1.20	1.000 *
1.40	1.000 *
1.60	1.000 *
1.80	1.263
2.00	1.244
2.20	1.226
2.40	1.208
2.60	1.189
2.80	1.170
3.00	1.155
3.20	1.148
3.40	1.151
3.60	1.155
3.80	1.157
4.00	1.157
4.20	1.156
4.40	1.155
4.60	1.154
4.80	1.151
5.00	1.148
5.20	1.144
5.40	1.140
5.60	1.138
5.80	1.143
6.00	1.153
6.20	1.162
6.40	1.166
6.60	1.169
6.80	1.174
7.00	1.179
7.20	1.182
7.40	1.184
7.60	1.184
7.80	1.181
8.00	1.176
8.20	1.170
8.40	1.159
8.60	1.150
8.80	1.149
9.00	1.153
9.20	1.158
9.40	1.162
9.60	1.165
9.80	1.171
10.00	1.178
10.20	1.185
10.40	1.000 *
10.60	1.000 *
10.80	1.000 *
11.00	1.000 *
11.20	1.000 *
11.40	1.000 *
11.60	1.000 *
11.80	1.000 *
12.00	1.000 *

* Top and bottom 15 % excluded as per Technical Specification 4.2.2.2.g

FIGURE 1

McGUIRE UNIT 1, CYCLE 2

RAOC W(z) at 150 MWD/MTU



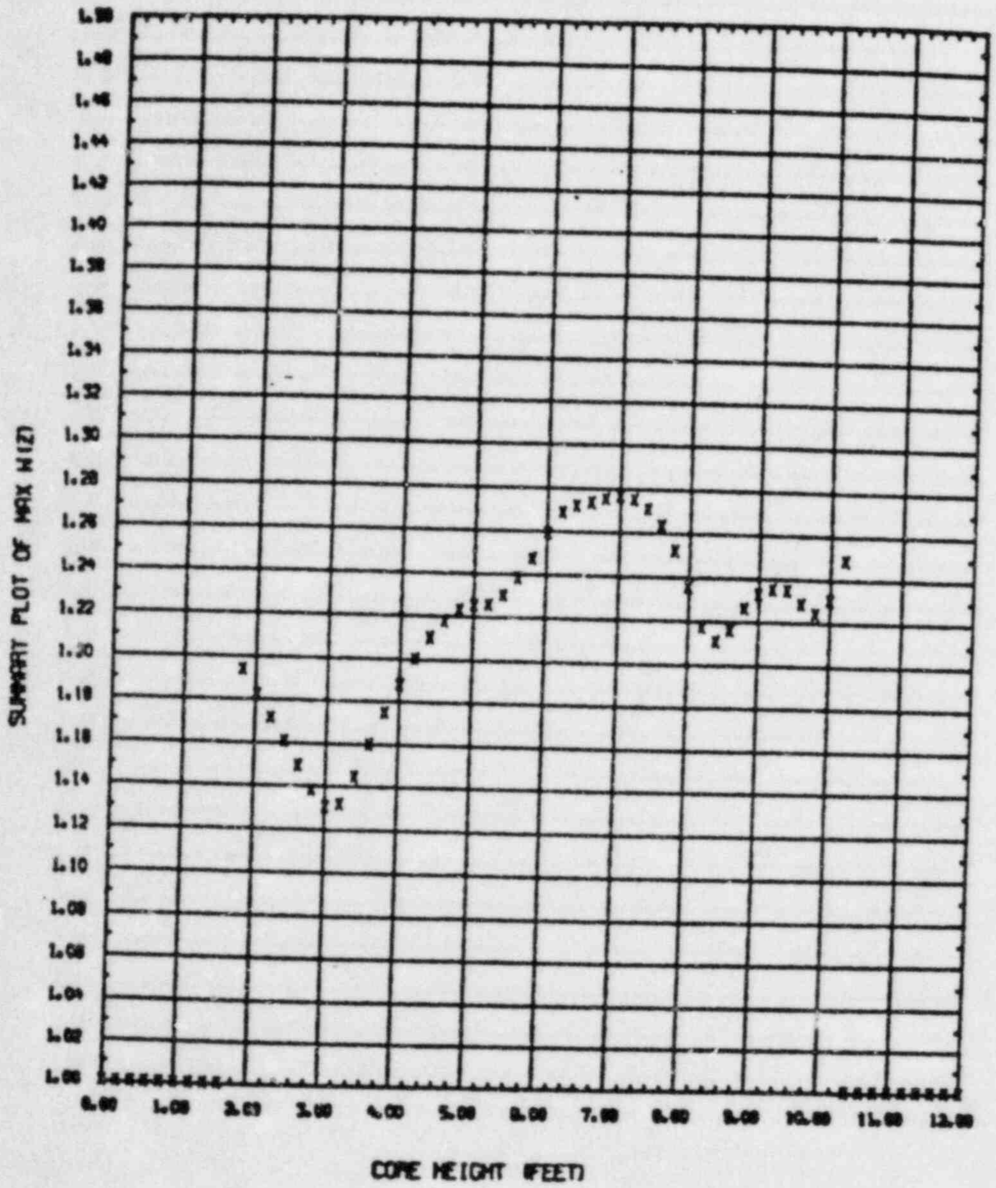
HEIGHT (FEET)	MAX W(Z)
0.00	1.000 *
.20	1.000 *
.40	1.000 *
.60	1.000 *
.80	1.000 *
1.00	1.000 *
1.20	1.000 *
1.40	1.000 *
1.60	1.000 *
1.80	1.189
2.00	1.188
2.20	1.185
2.40	1.181
2.60	1.174
2.80	1.167
3.00	1.165
3.20	1.172
3.40	1.188
3.60	1.205
3.80	1.223
4.00	1.238
4.20	1.251
4.40	1.261
4.60	1.269
4.80	1.274
5.00	1.276
5.20	1.276
5.40	1.276
5.60	1.276
5.80	1.279
6.00	1.291
6.20	1.305
6.40	1.315
6.60	1.322
6.80	1.326
7.00	1.327
7.20	1.324
7.40	1.316
7.60	1.306
7.80	1.296
8.00	1.284
8.20	1.270
8.40	1.25[illegible]
8.60	1.255
8.80	1.260
9.00	1.259
9.20	1.251
9.40	1.241
9.60	1.247
9.80	1.261
10.00	1.270
10.20	1.273
10.40	1.000 *
10.60	1.000 *
10.80	1.000 *
11.00	1.000 *
11.20	1.000 *
11.40	1.000 *
11.60	1.000 *
11.80	1.000 *
12.00	1.000 *

* Top and bottom 15 % excluded as per Technical Specification 4.2.2.2.g

FIGURE 2

McGUIRE UNIT 1, CYCLE 2

RAOC W(z) at 4000 MWD/MTU



HEIGHT (FEET)	MAX W(Z)
0.00	1.000 *
.20	1.000 *
.40	1.000 *
.60	1.000 *
.80	1.000 *
1.00	1.000 *
1.20	1.000 *
1.40	1.000 *
1.60	1.000 *
1.80	1.194
2.00	1.182
2.20	1.171
2.40	1.160
2.60	1.149
2.80	1.138
3.00	1.130
3.20	1.131
3.40	1.144
3.60	1.159
3.80	1.175
4.00	1.188
4.20	1.200
4.40	1.210
4.60	1.218
4.80	1.223
5.00	1.225
5.20	1.226
5.40	1.230
5.60	1.238
5.80	1.247
6.00	1.259
6.20	1.269
6.40	1.272
6.60	1.274
6.80	1.276
7.00	1.277
7.20	1.275
7.40	1.271
7.60	1.264
7.80	1.252
8.00	1.236
8.20	1.217
8.40	1.211
8.60	1.216
8.80	1.226
9.00	1.233
9.20	1.235
9.40	1.235
9.60	1.228
9.80	1.224
10.00	1.230
10.20	1.249
10.40	1.000 *
10.60	1.000 *
10.80	1.000 *
11.00	1.000 *
11.20	1.000 *
11.40	1.000 *
11.60	1.000 *
11.80	1.000 *
12.00	1.000 *

* Top and bottom 15 % excluded as per Technical Specification 4.2.2.2.g

FIGURE 3

McGUIRE UNIT 1, CYCLE 2

RAOC W(z) at 9000 MWD/MTU

PEAKING FACTOR LIMIT REPORT FOR MCGUIRE UNIT 1, CYCLE 2

BASE LOAD OPERATION

This Peaking Factor Limit Report is provided in accordance with Paragraph 6.9.1.9 of the McGuire Unit 1 Technical Specifications.

The McGuire Unit 1, Cycle 2 elevation dependent W(z) values for base load operation between 80% and 100% of rated thermal power with a ±3 percent AFD about a measured target value at 1200, 3000, and 6000 MWD/MTU Cycle 2 burnups are shown in Figures 1 through 3 respectively. This information is sufficient to determine W(z) versus core height for Cycle 2 burnups in the range of 1200 MWD/MTU to 6000 MWD/MTU through the use of three point interpolation. W(z) was calculated using the method described in Part B of Reference 1.

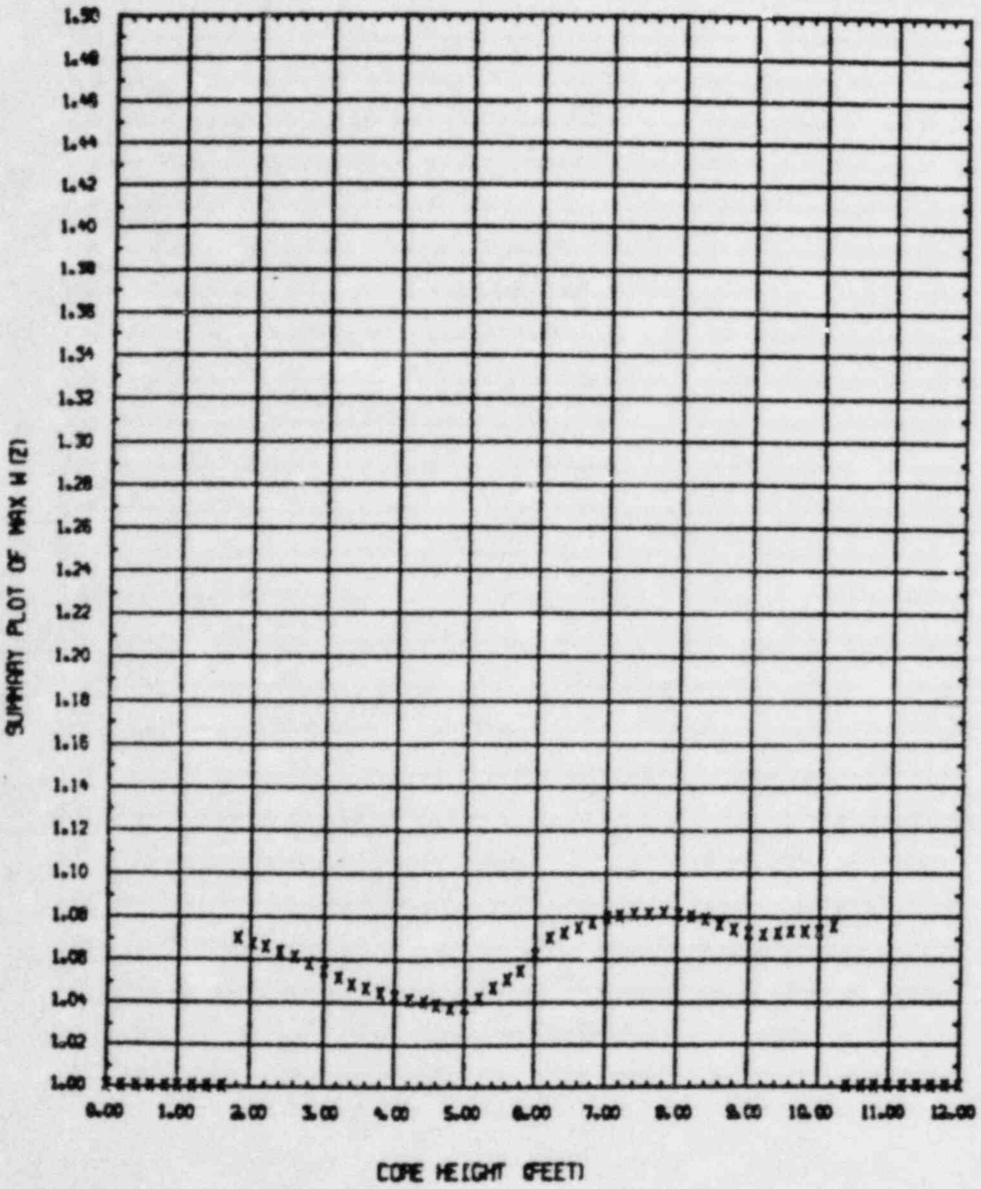
The minimum allowable power level for base load operation, APL^{ND}, for McGuire 1 Cycle 2 is 80 percent of rated thermal power. The appropriate W(z) function is used to confirm that the heat flux hot channel factor, $F_Q(z)$ will be limited to the Technical Specification values of:

$$F_Q(z) \leq \frac{2.15}{P} \quad [K(z)] \text{ for } P > 0.50 \text{ and}$$

$$F_Q(z) \leq 4.30 \quad [K(z)] \text{ for } P \leq 0.50$$

The appropriate elevation dependent W(z) values, when applied to a power distribution measured under equilibrium conditions, demonstrates that the initial conditions assumed in the LOCA are met, along with the ECCS acceptance criteria of 10CFR50.46.

(1) WCAP-10216-P-A, Relaxation of Constant Axial Control - F_Q Surveillance Technical Specification



	HEIGHT (FEET)	MAX W(Z)
1	0.00	1.000 ✗
2	.20	1.000 ✗
3	.40	1.000 ✗
4	.60	1.000 ✗
5	.80	1.000 ✗
6	1.00	1.000 ✗
7	1.20	1.000 ✗
8	1.40	1.000 ✗
9	1.60	1.000 ✗
10	1.80	1.070
11	2.00	1.068
12	2.20	1.066
13	2.40	1.063
14	2.60	1.061
15	2.80	1.058
16	3.00	1.055
17	3.20	1.051
18	3.40	1.048
19	3.60	1.046
20	3.80	1.044
21	4.00	1.043
22	4.20	1.041
23	4.40	1.040
24	4.60	1.039
25	4.80	1.037
26	5.00	1.038
27	5.20	1.042
28	5.40	1.046
29	5.60	1.050
30	5.80	1.054
31	6.00	1.062
32	6.20	1.069
33	6.40	1.072
34	6.60	1.074
35	6.80	1.077
36	7.00	1.079
37	7.20	1.080
38	7.40	1.081
39	7.60	1.081
40	7.80	1.081
41	8.00	1.081
42	8.20	1.080
43	8.40	1.079
44	8.60	1.076
45	8.80	1.074
46	9.00	1.072
47	9.20	1.071
48	9.40	1.072
49	9.60	1.073
50	9.80	1.073
51	10.00	1.073
52	10.20	1.075
53	10.40	1.000 ✗
54	10.60	1.000 ✗
55	10.80	1.000 ✗
56	11.00	1.000 ✗
57	11.20	1.000 ✗
58	11.40	1.000 ✗
59	11.60	1.000 ✗
60	11.80	1.000 ✗
61	12.00	1.000 ✗

✗ Top and bottom 15 % excluded as per Technical Specification 4.2.2.4.g

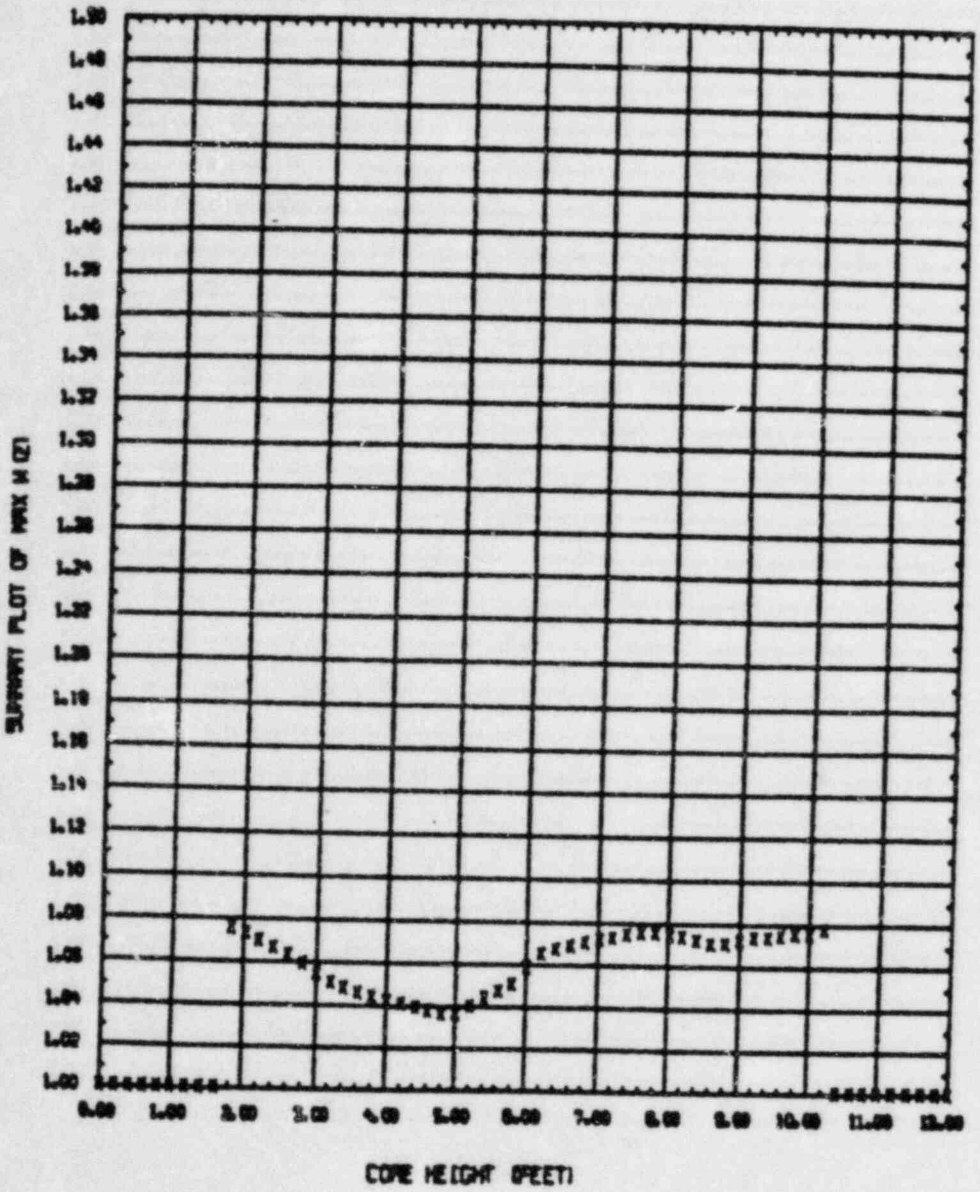
FIGURE 1

McGUIRE UNIT 1, CYCLE 2

BASELOAD W(z) FOR POWERS BETWEEN 80% AND 100% OF RATED THERMAL POWER

WITHIN ± 3 PERCENT AFD OF THE MEASURED TARGET

1200 MWD/MTU



	HEIGHT (FEET)	MAX W(Z)
1	0.00	1.000 *
2	.20	1.000 *
3	.40	1.000 *
4	.60	1.000 *
5	.80	1.000 *
6	1.00	1.000 *
7	1.20	1.000 *
8	1.40	1.000 *
9	1.60	1.000 *
10	1.80	1.075
11	2.00	1.073
12	2.20	1.070
13	2.40	1.067
14	2.60	1.063
15	2.80	1.060
16	3.00	1.056
17	3.20	1.051
18	3.40	1.048
19	3.60	1.046
20	3.80	1.044
21	4.00	1.042
22	4.20	1.041
23	4.40	1.040
24	4.60	1.038
25	4.80	1.036
26	5.00	1.036
27	5.20	1.040
28	5.40	1.044
29	5.60	1.047
30	5.80	1.051
31	6.00	1.058
32	6.20	1.065
33	6.40	1.067
34	6.60	1.069
35	6.80	1.071
36	7.00	1.072
37	7.20	1.073
38	7.40	1.074
39	7.60	1.075
40	7.80	1.075
41	8.00	1.074
42	8.20	1.074
43	8.40	1.072
44	8.60	1.070
45	8.80	1.070
46	9.00	1.072
47	9.20	1.073
48	9.40	1.074
49	9.60	1.075
50	9.80	1.075
51	10.00	1.075
52	10.20	1.077
53	10.40	1.000 *
54	10.60	1.000 *
55	10.80	1.000 *
56	11.00	1.000 *
57	11.20	1.000 *
58	11.40	1.000 *
59	11.60	1.000 *
60	11.80	1.000 *
61	12.00	1.000 *

* Top and bottom 15 % excluded as per Technical Specification 4.2.2.4.g

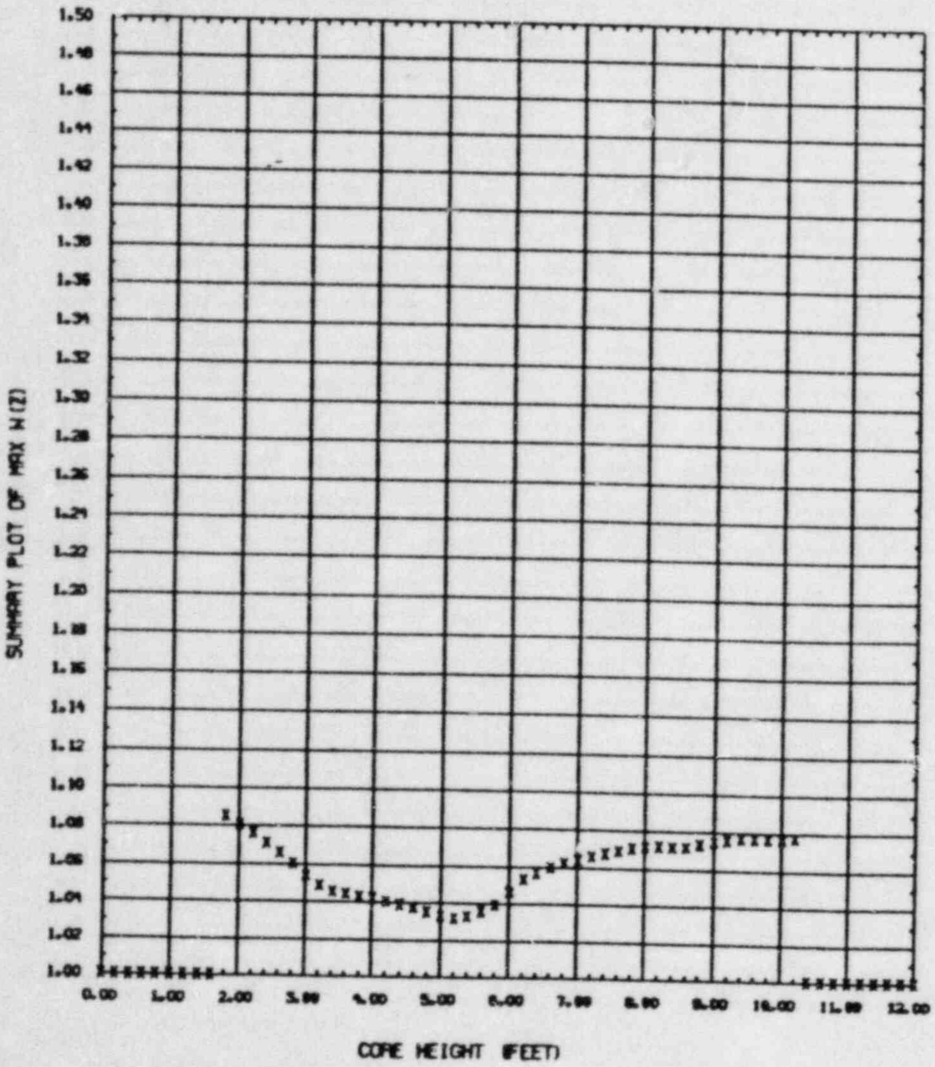
FIGURE 2

McGUIRE UNIT 1, CYCLE 2

BASELOAD W(z) FOR POWERS BETWEEN 80% AND 100% OF RATED THERMAL POWER

WITHIN ± 3 PERCENT AFD OF THE MEASURED TARGET

3000 MWD/MTU



	HEIGHT (FEET)	MAX W(Z)
1	0.00	1.000 *
2	.20	1.000 *
3	.40	1.000 *
4	.60	1.000 *
5	.80	1.000 *
6	1.00	1.000 *
7	1.20	1.000 *
8	1.40	1.000 *
9	1.60	1.000 *
10	1.80	1.085
11	2.00	1.080
12	2.20	1.076
13	2.40	1.071
14	2.60	1.066
15	2.80	1.060
16	3.00	1.054
17	3.20	1.049
18	3.40	1.046
19	3.60	1.044
20	3.80	1.043
21	4.00	1.042
22	4.20	1.041
23	4.40	1.039
24	4.60	1.037
25	4.80	1.036
26	5.00	1.033
27	5.20	1.031
28	5.40	1.033
29	5.60	1.036
30	5.80	1.039
31	6.00	1.046
32	6.20	1.053
33	6.40	1.057
34	6.60	1.059
35	6.80	1.062
36	7.00	1.064
37	7.20	1.066
38	7.40	1.068
39	7.60	1.069
40	7.80	1.071
41	8.00	1.072
42	8.20	1.072
43	8.40	1.071
44	8.60	1.072
45	8.80	1.073
46	9.00	1.075
47	9.20	1.076
48	9.40	1.077
49	9.60	1.077
50	9.80	1.077
51	10.00	1.077
52	10.20	1.077
53	10.40	1.000 *
54	10.60	1.000 *
55	10.80	1.000 *
56	11.00	1.000 *
57	11.20	1.000 *
58	11.40	1.000 *
59	11.60	1.000 *
60	11.80	1.000 *
61	12.00	1.000 *

* Top and bottom 15 % excluded as per Technical Specification 4.2.2.4.g

FIGURE 3

McGUIRE UNIT 1, CYCLE 2

BASELOAD W(z) FOR POWERS BETWEEN 80% AND 100% OF RATED THERMAL POWER

WITHIN ± 3 PERCENT AFD OF THE MEASURED TARGET

6000 MWD/MTU

Attachment 3

Analysis of Significant Hazards Consideration

As required by 10 CFR 50.91, this analysis is provided concerning whether the proposed amendments involve significant hazards considerations, as defined by 10 CFR 50.92. Standards for determination that a proposed amendment involves no significant hazards considerations are if operation of the facility in accordance with the proposed amendment would not: 1) involve a significant increase in the probability or consequences of an accident previously evaluated; or 2) create the possibility of a new or different kind of accident from any accident previously evaluated; or 3) involve a significant reduction in a margin of safety.

The proposed amendments would expand the Power Distribution Limits section of the McGuire 1 Technical Specifications to include Base Load Operation in addition to the currently approved RAOC operation. Base Load Operation is defined as operation within a ±3 percent AFD band about a measured target in a power range to be specified in the peaking factor limit report.

Since Base Load Operation is a subset of RAOC, the amendments would not increase the probability of an accident previously evaluated, and could not create the possibility of a new or different kind of accident from any accident previously evaluated. The Reload Safety Evaluation for McGuire Unit 1 Cycle 2 ensures safe operation for all power levels including hot full power with RAOC operation. A safety evaluation was performed by Westinghouse to address the impact of Base Load Operation on plant safety. Since the limits for Base Load Operation are a subset of the RAOC limits and maintain the same initial conditions assumed for the transient safety analysis, it was determined that the conclusions of the Reload Safety Evaluation will remain valid for Base Load Operation. Therefore, since no changes to accident analyses are necessary the proposed amendments do not involve a reduction in a margin of safety or an increase in the consequences of an accident previously evaluated.

Based upon the preceding analyses, Duke Power Company concludes that the proposed amendments do not involve a significant hazards consideration.