PROPOSED TECHNICAL SPECIFICATION PAGES

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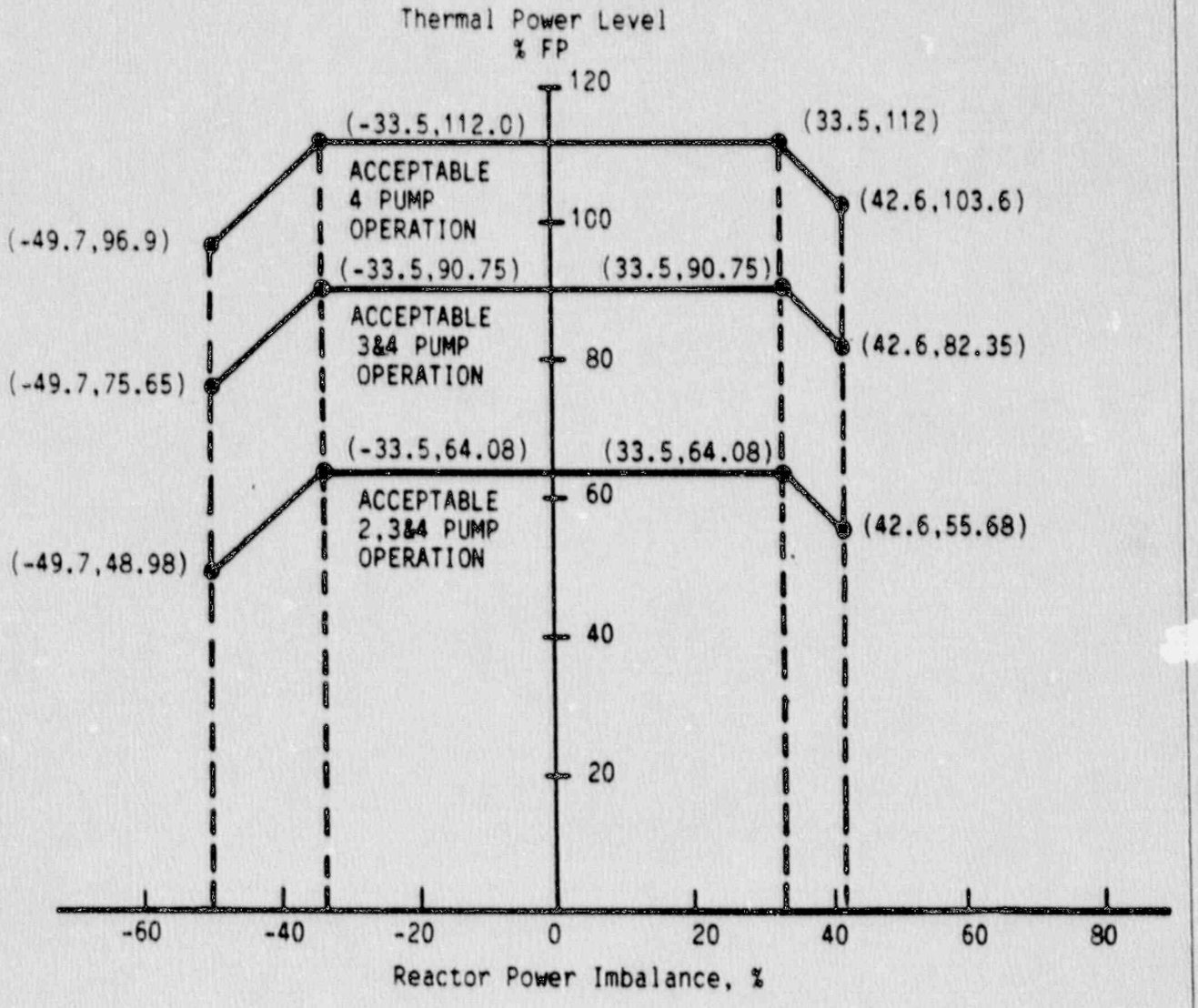
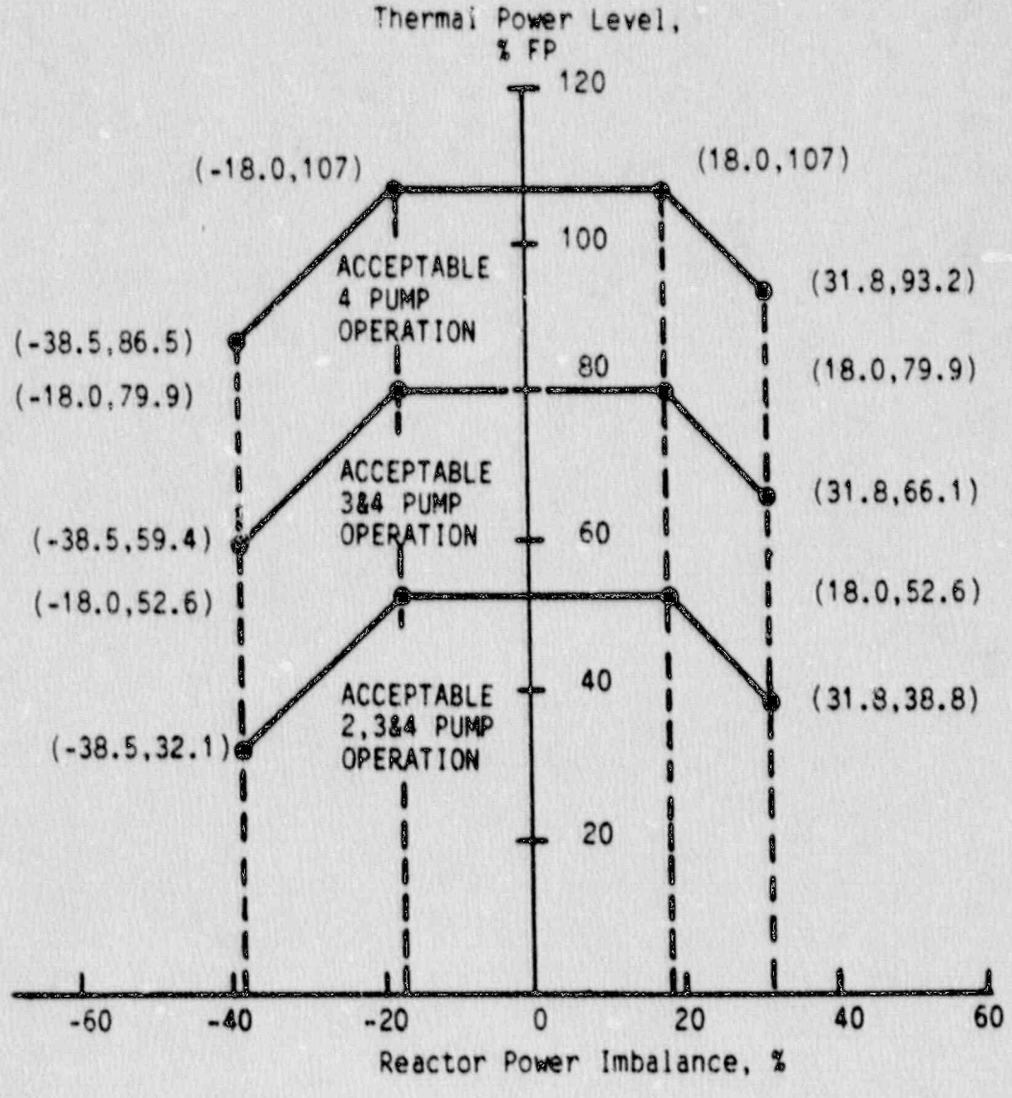
Core Protection Safety Limits - ANO-1
Figure 2.1-2



Protective System Maximum Allowable Setpoints
ANO-1, Figure 2.3-2



3.1.7 Moderator Temperature Coefficient of Reactivity Specification

3.1.7.1 The moderator temperature coefficient (MTC) shall be non-positive whenever thermal power is ≥95% of rated thermal power and shall be less positive than 0.9×10^{-4} $\Delta k/k/^{\circ}F$ whenever thermal power is <95% of rated thermal power and the reactor is not shutdown.

3.1.7.2 The MTC shall be determined to be within its limits by confirmatory measurements prior to initial operation above 5% of rated thermal power after each fuel loading. MTC measured values shall be extrapolated and/or compensated to permit direct comparison with the limits in 3.1.7.1 above.

3.1.7.3 With the MTC outside any one of the above limits, be in at least HOT STANDBY within 6 hours.

Bases

A non-positive moderator coefficient at power levels above 95% of rated power is specified such that the maximum clad temperatures will not exceed the Final Acceptance Criteria based on LOCA analyses. Below 95% of rated power, the Final Acceptance Criteria will not be exceeded with a positive moderator temperature coefficient of $+0.9 \times 10^{-4}$ $\Delta k/k/^{\circ}F$ corrected to 95% of rated power. The most limiting event for positive MTC, the Startup Accident, has been analyzed for a range of moderator temperature coefficients including $+0.9 \times 10^{-4}$ $\Delta k/k/^{\circ}F$.

6. If a control rod in the regulating or axial power shaping groups is declared inoperable per Specification 4.7.1.2 operation above 60 percent of the thermal power allowable for the reactor coolant pump combination may continue provided the rods in the group are positioned such that the rod that was declared inoperable is contained within allowable group average position limits of Specification 4.7.1.2 and the withdrawal limits of Specification 3.5.2.5.3.

3.5.2.3 The worth of single inserted control rods during criticality are limited by the restrictions of Specification 3.1.3.5 and the Control Rod Position Limits defined in Specification 3.5.2.5.

3.5.2.4 Quadrant tilt:

1. Except for physics tests, if quadrant tilt exceeds 4.24%, reduce power so as not to exceed the allowable power level for the existing reactor coolant pump combination less at least 2% for each 1% tilt in excess of 4.24%.

2. Within a period of 4 hours, the quadrant power tilt shall be reduced to less than 4.24% except for physics tests, or the following adjustments in setpoints and limits shall be made:

   a. The protection system maximum allowable setpoints (Figure 2.3-2) shall be reduced 2% in power for each 1% tilt in excess of 4.24%.

   b. The control rod group and APSR withdrawal limits shall be reduced 2% in power for each 1% tilt in excess of 4.24%.

   c. The operational imbalance limits shall be reduced 2% in power for each 1% tilt in excess of 4.24%.

3. If quadrant tilt is in excess of 25%, except for physics tests or diagnostic testing, the reactor will be placed in the hot shutdown condition. Diagnostic testing during power operation with a quadrant power tilt is permitted provided the thermal power allowable for the reactor coolant pump combination is restricted as stated in 3.5.2.4.1 above.

4. Quadrant tilt shall be monitored on a minimum frequency of once every two hours during power operation above 15% of rated power.

3. Except for physics tests or exercising control rods, the control rod withdrawal limits are specified on Figures 3.5.2-1(A-C), 3.5.2-2(A-C), and 3.5.2-3(A-C) for 4, 3, and 2 pump operation respectively. If the applicable control rod position limits are exceeded, corrective measures shall be taken immediately to achieve an acceptable control rod position. Acceptable control rod positions shall be attained within 4 hours.

4. Except for physics tests or exercising axial power shaping rods (APSRs), the following limits apply to APSR position:

   Up to 345 EFPD, the APSRs may be positioned as necessary for transient imbalance control, however, the APSRs shall be fully withdrawn by 345 EFPD. After 345 EFPD, the APSRs shall not be reinserted.

   With the APSRs inserted after 345 EFPD, corrective measures shall be taken immediately to achieve the full withdrawn position. Acceptable APSR positions shall be attained within 4 hours.

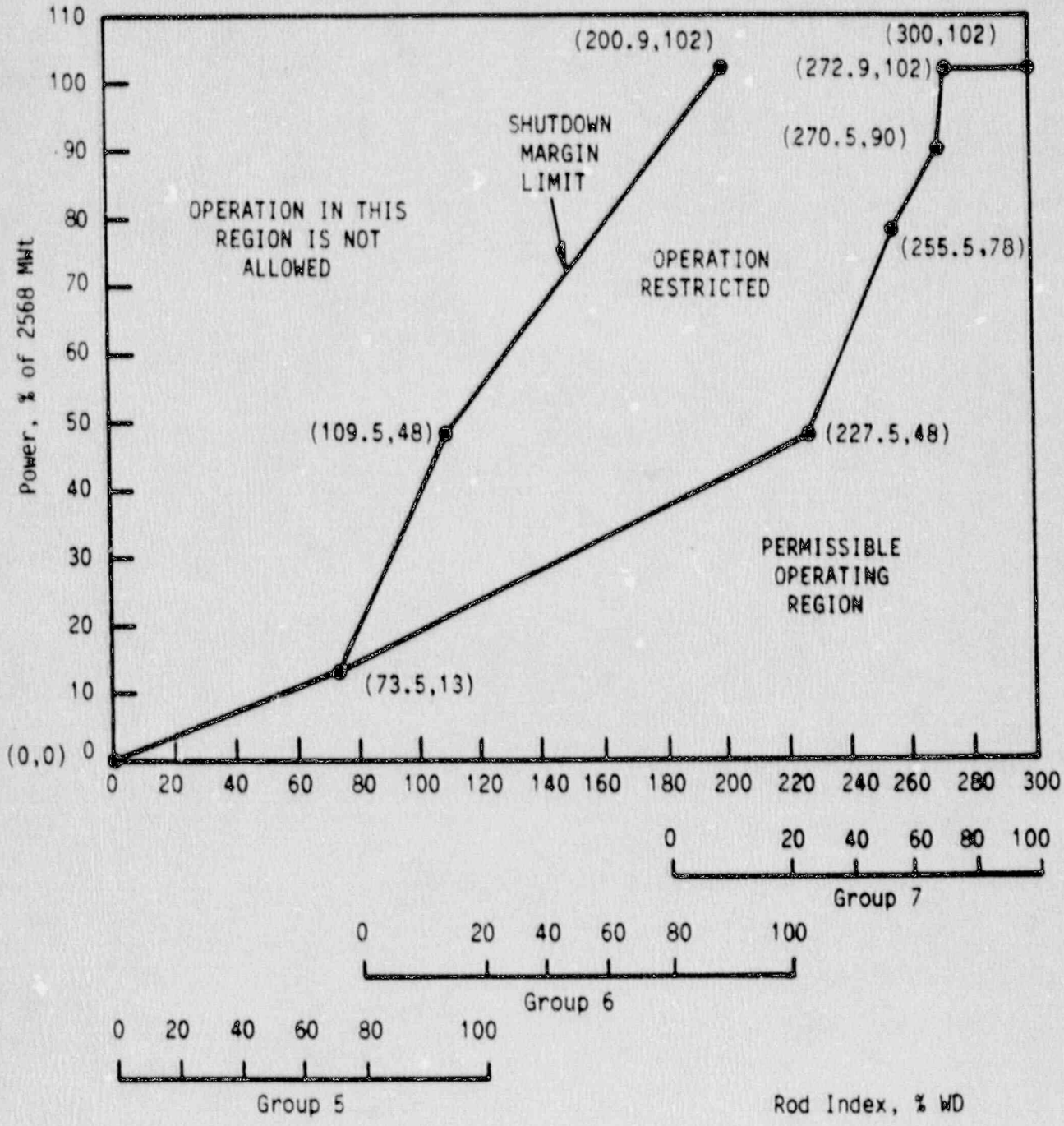
3.5.2.6 Reactor Power Imbalance shall be monitored on a frequency not to exceed 2 hours during power operation above 40% rated power. Except for physics tests, imbalance shall be maintained within the envelope defined by Figure 3.5.2-4(A-C). If the imbalance is not within the envelope defined by Figure 3.5.2-4(A-C), corrective measures shall be taken to achieve an acceptable imbalance. If an acceptable imbalance is not achieved within 4 hours, reactor power shall be reduced until imbalance limits are met.

3.5.2.7 The control rod drive patch panels shall be locked at all times with limited access to be authorized by the Superintendent.

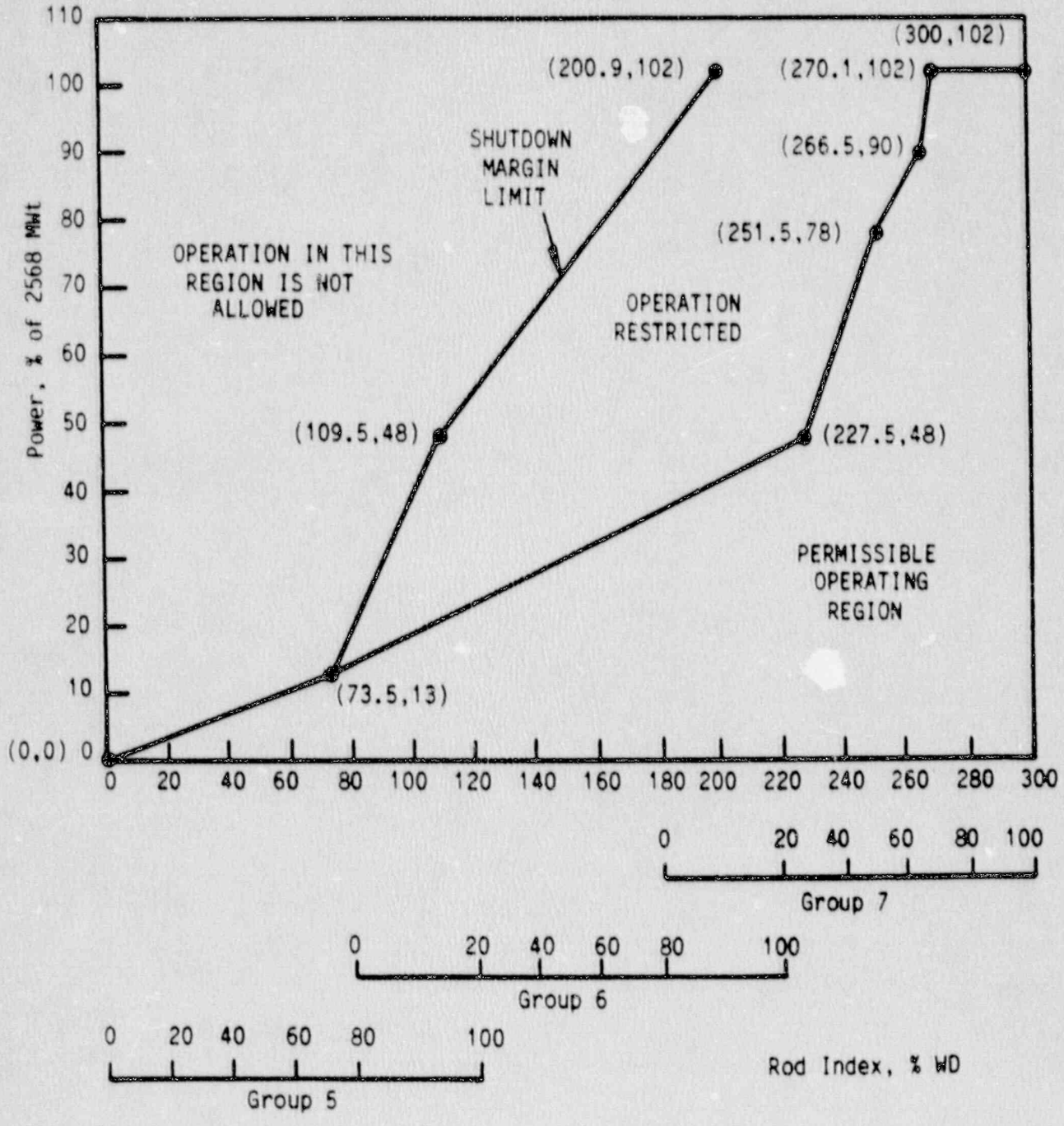
Bases

The power-imbalance envelope defined in Figure 3.5.2-4(A-C) is based on LOCA analyses which have defined the maximum linear heat rate (see Figure 3.5.2-5), such that the maximum cladding temperature will not exceed the Final Acceptance Criteria. Corrective measures will be taken immediately should the indicated quadrant tilt, rod position, or imbalance be outside their specified boundaries. Operation in a situation that would cause the Final Acceptance Criteria to be approached should a LOCA occur is highly improbable because all of the power distribution parameters (quadrant tilt, rod position, and imbalance) must be at their limits while

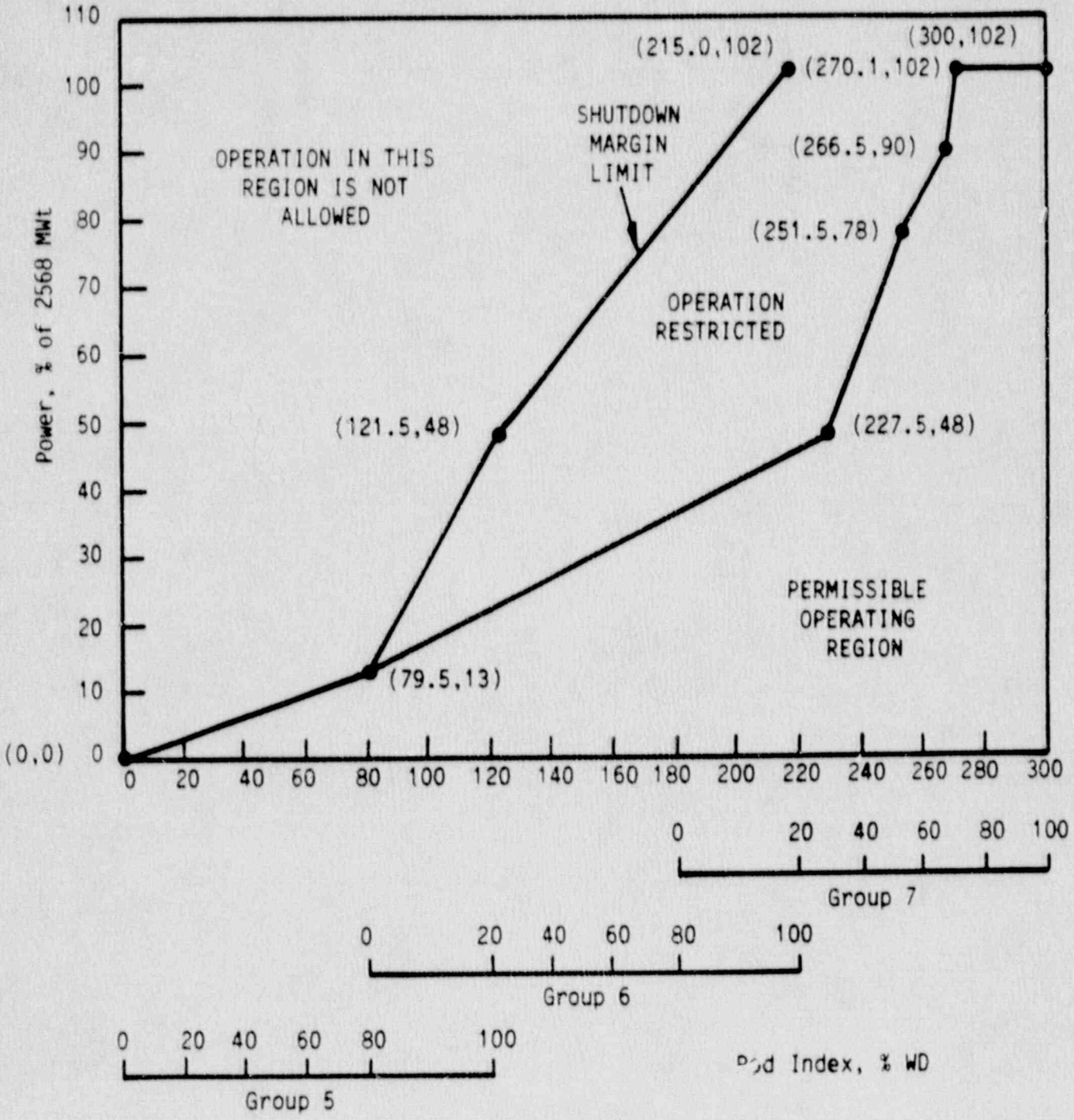
Rod Position Setpoints for 4-Pump Operation
From 0 to 30 +10/-0 EFPD ANO-1 Cycle 10
Figure 3.5.2-1A



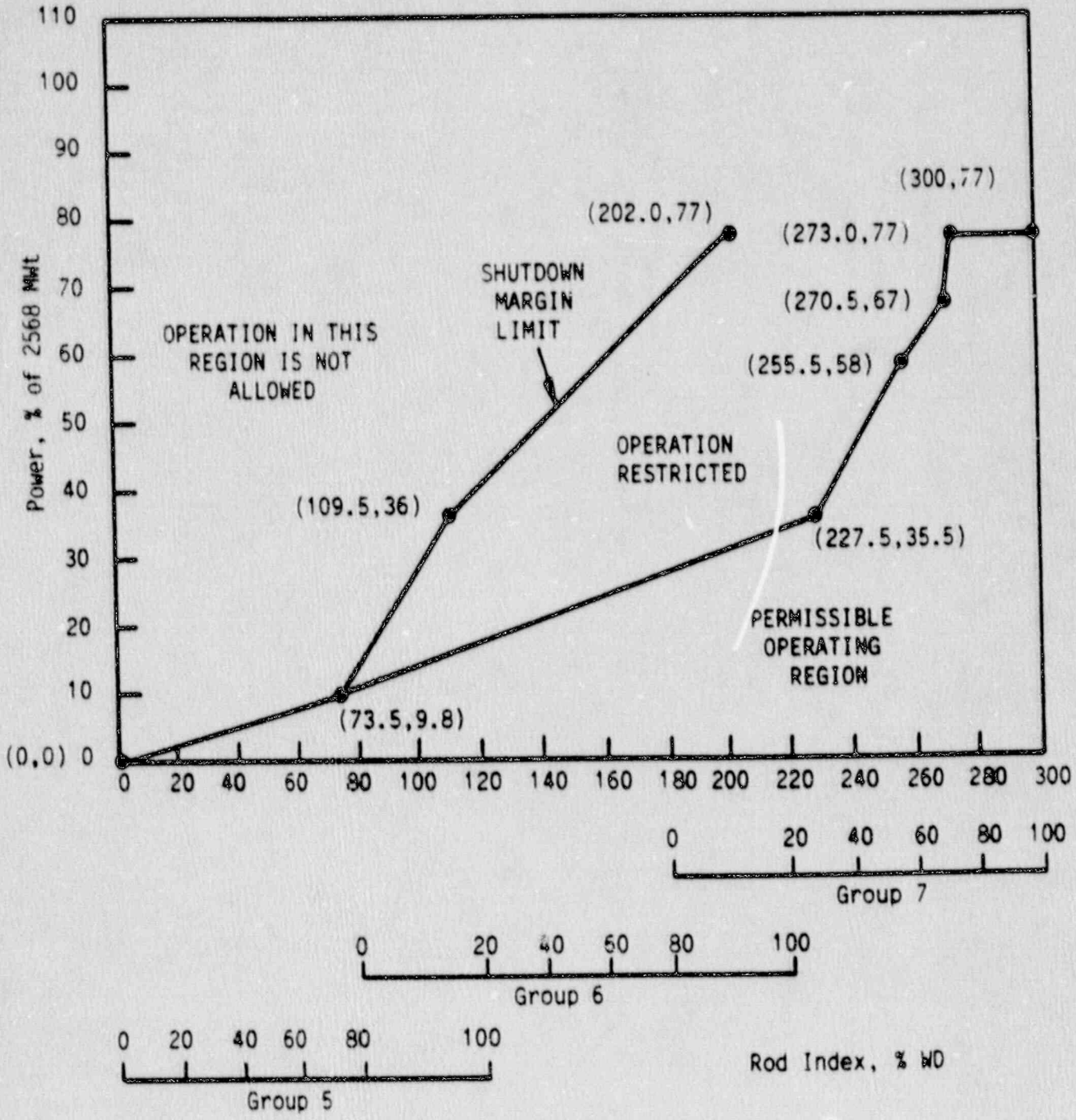
Rod Position Setpoints for 4-Pump Operation
From 30 +10/-0 to 335 +10/-10 EFPD ANO-1 Cycle 10
Figure 3.5.2-1B



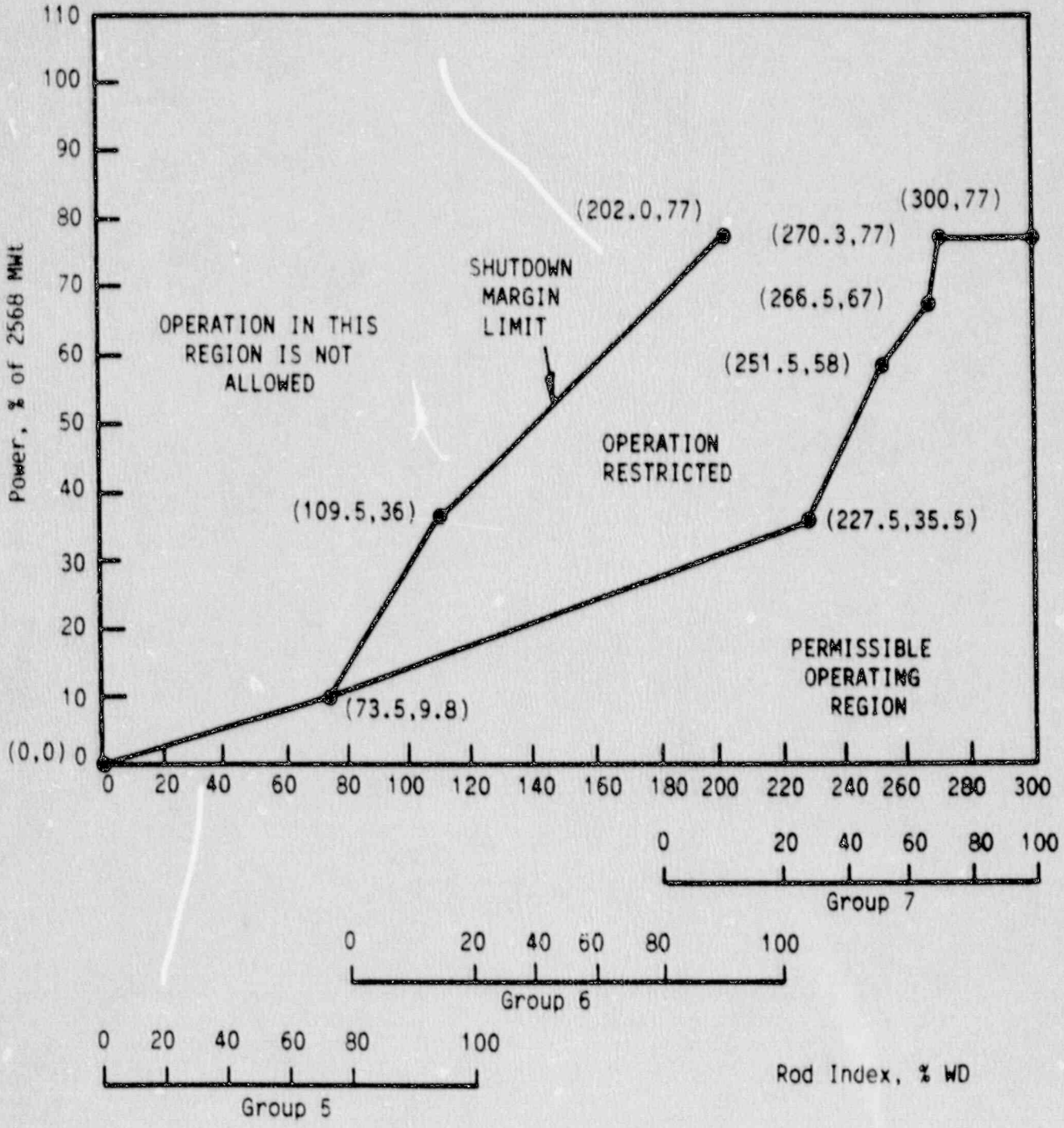
Rod Position Setpoints for 4 - Pump Operation
After 335 +10/-10 EFPD ANO-1 Cycle 10
Figure 3.5.2-1C



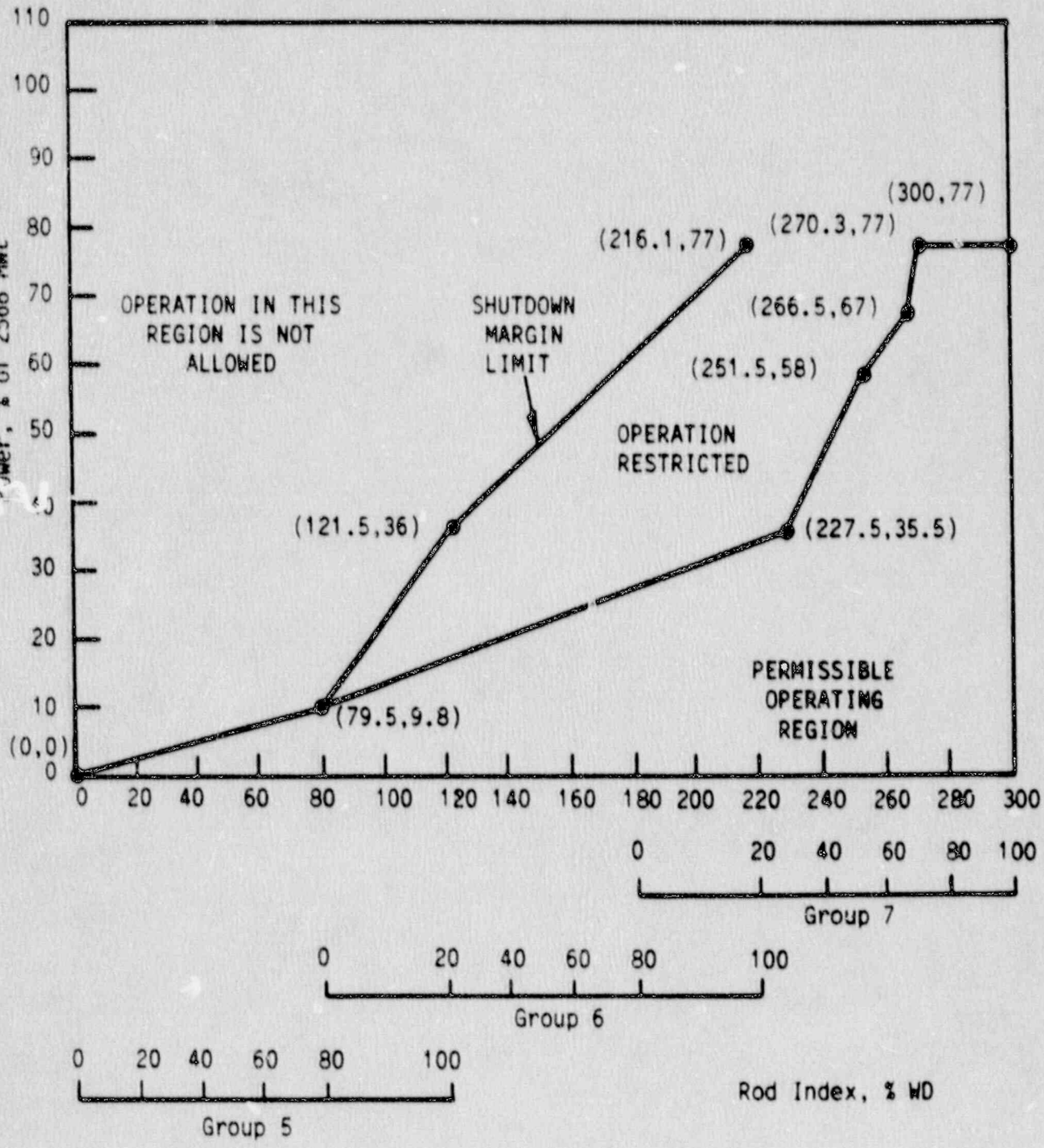
Rod Position Setpoints for 3-Pump Operation
From 0 to 30 +10/-0 EFPD -- ANO-1 Cycle 10
Figure 3.5.2-2A



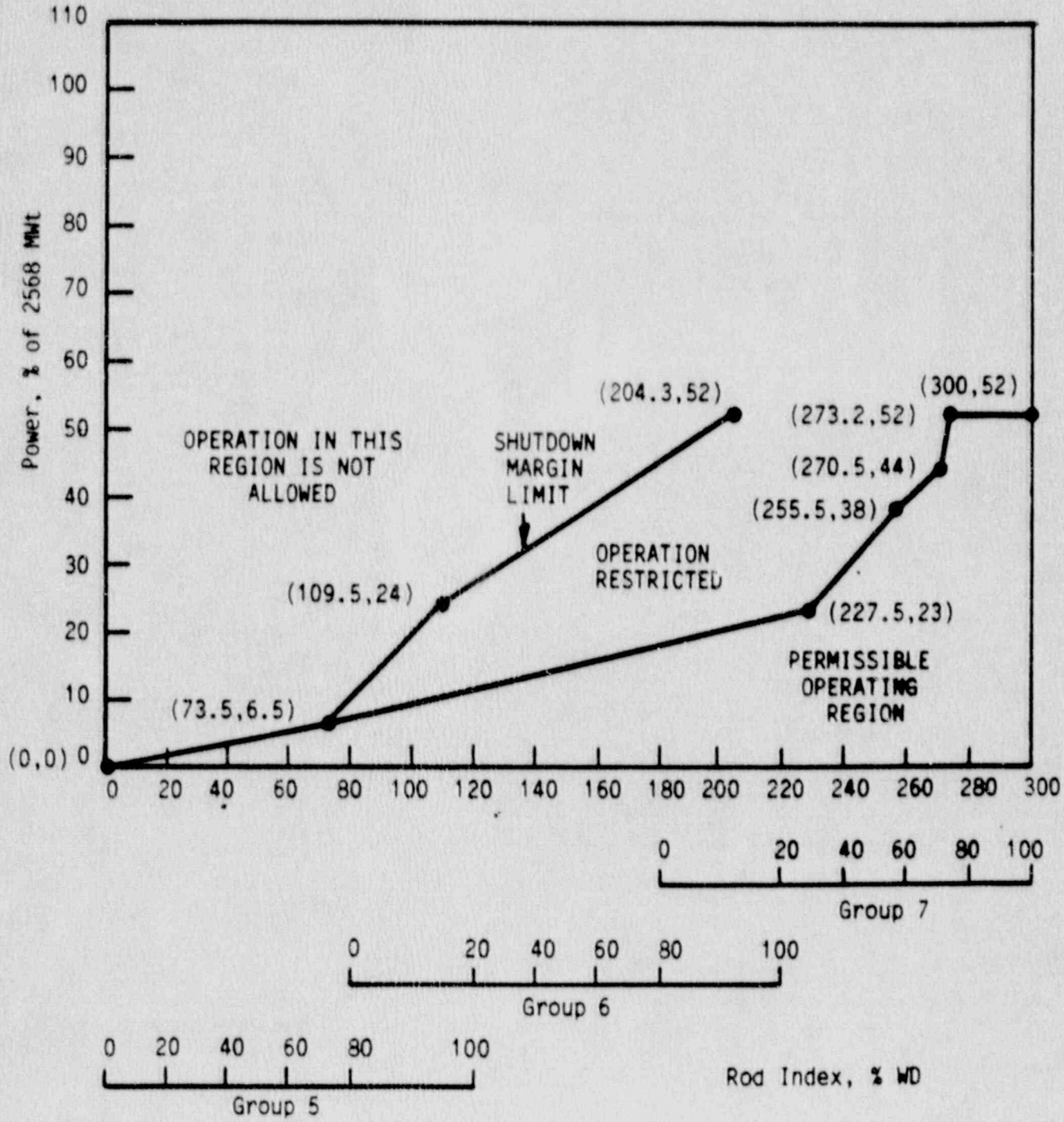
Rod Position Setpoints for 3-Pump Operation
From 30 +10/-0 to 335 +10/-10 EFPD -- ANO-1 Cycle 10
Figure 3.5.2-2B



Rod Position Setpoints for 3-Pump Operation
After 335 +10/-10 EFPD -- ANO-1 Cycle 10
Figure 3.5.2-2C

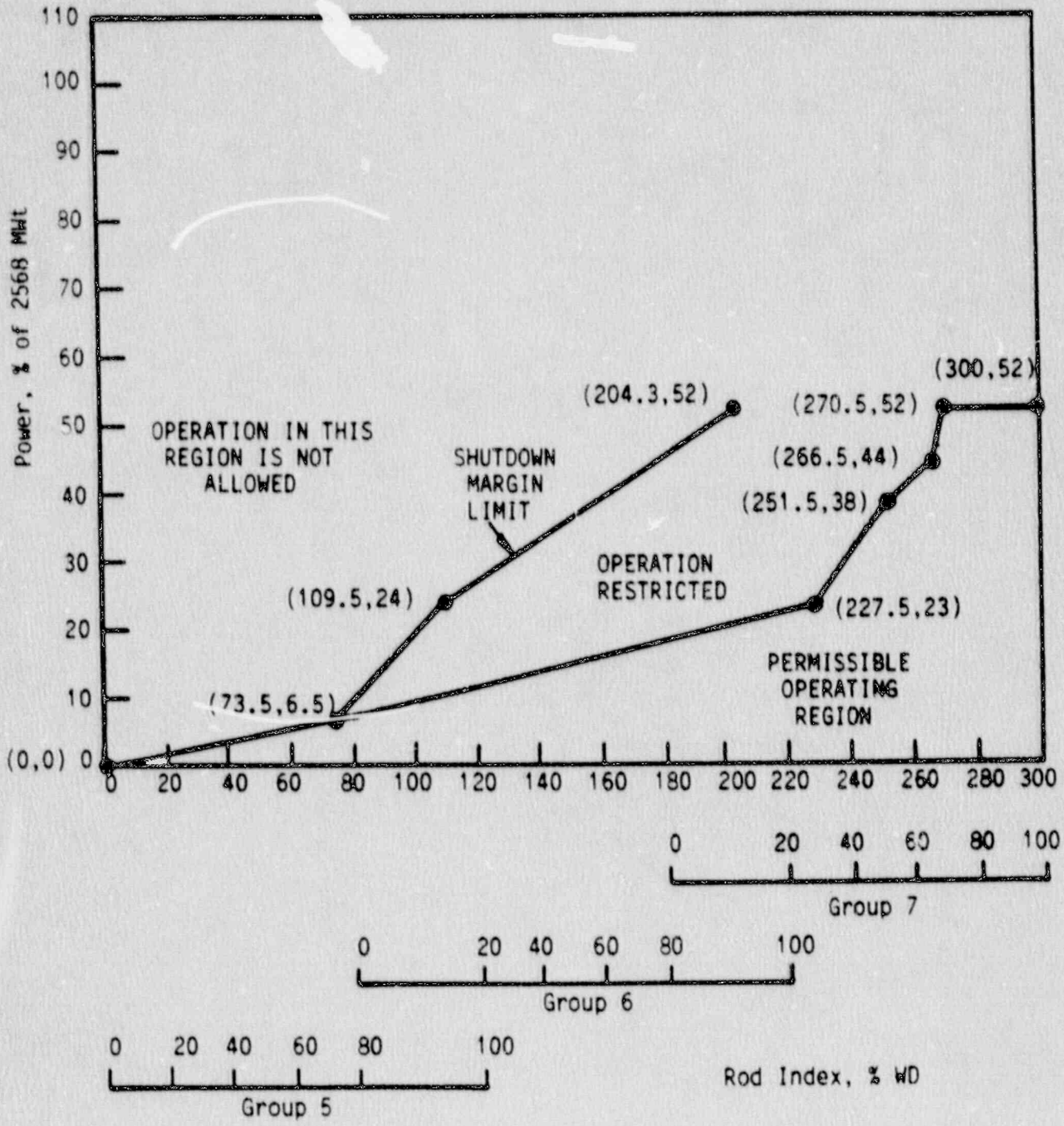


Rod Position Setpoints for 2-Pump Operation
From 0 to 30 +10/-0 EFPD -- ANO-1 Cycle 10
Figure 3.5.2-3A

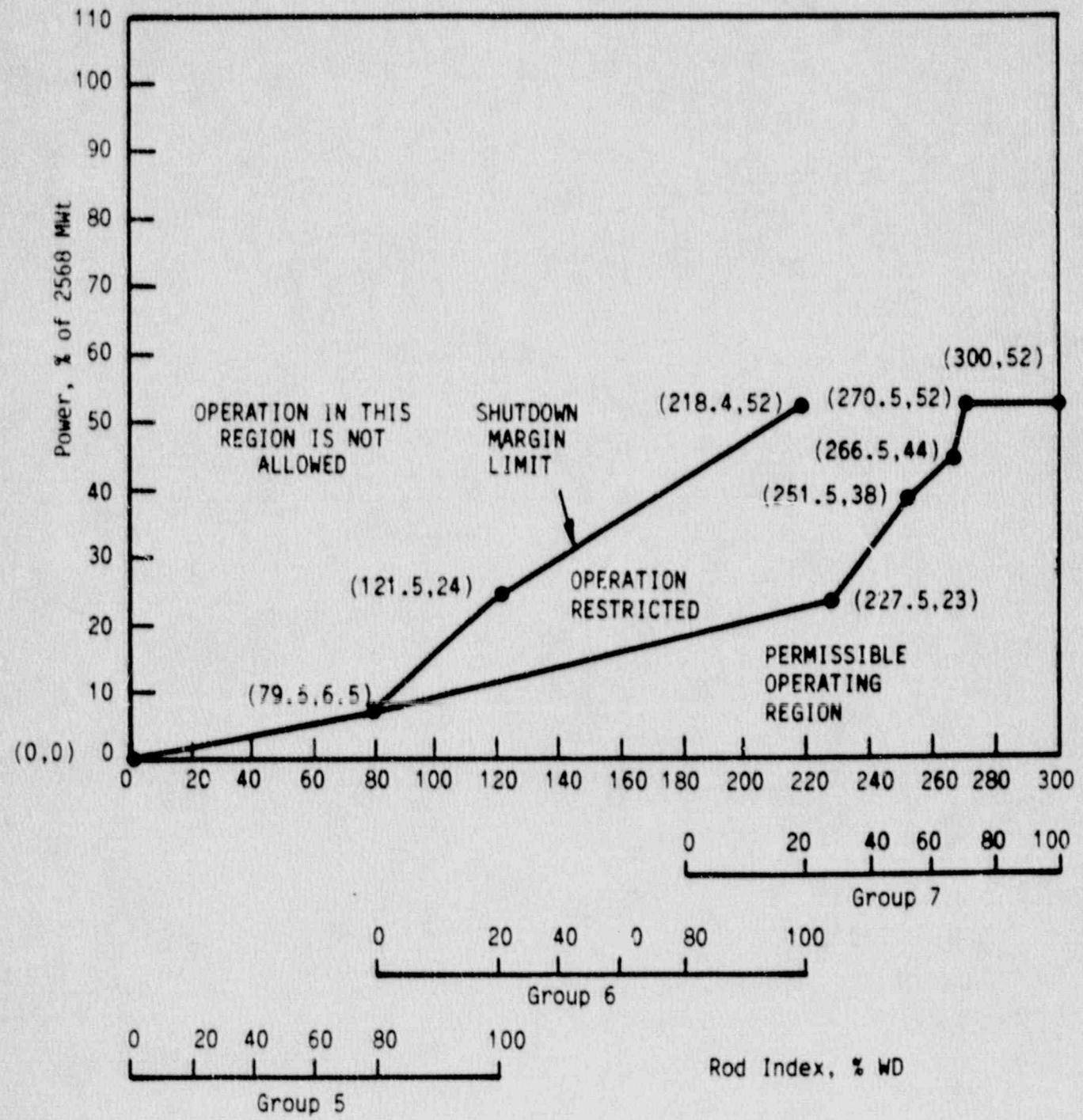


Amendment No. 21, 31, 43, 52, 71, 92, 108, 113, 48h

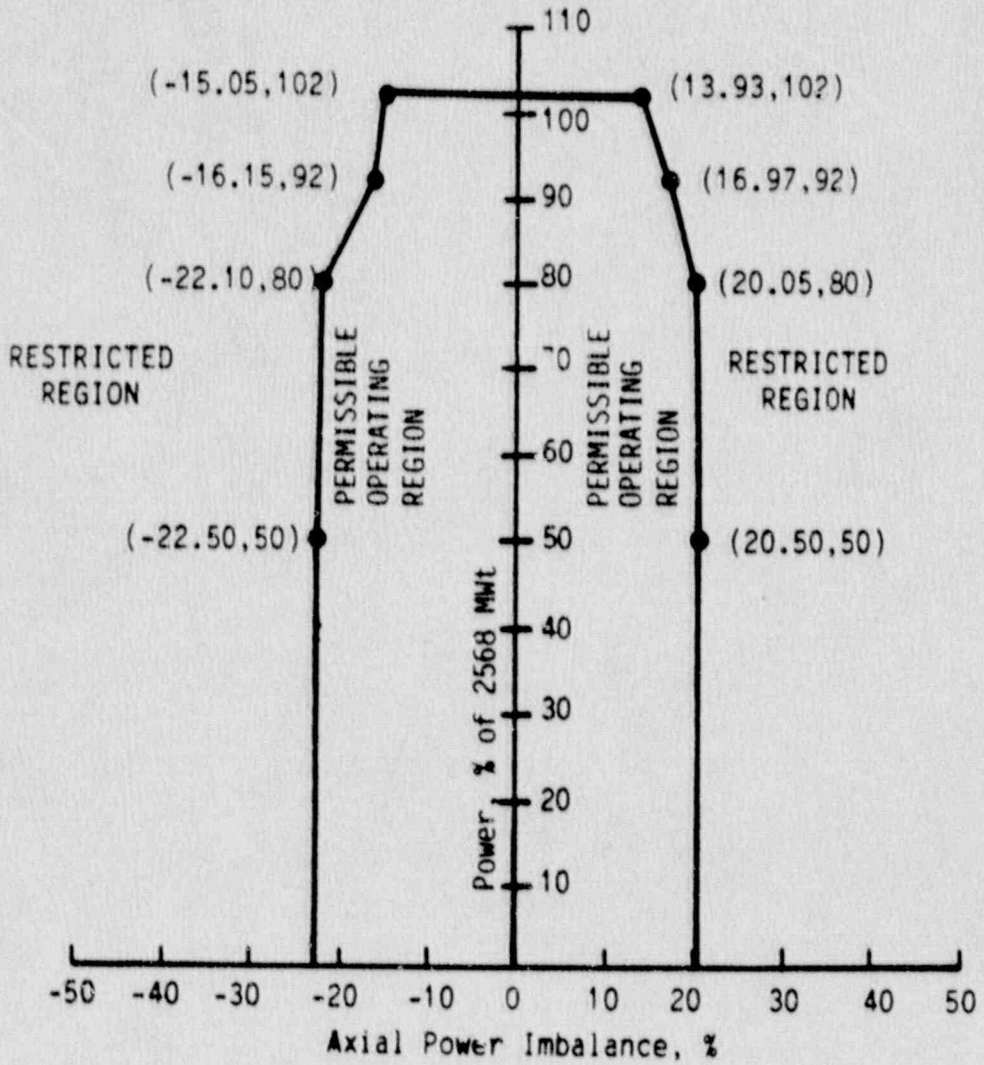
Rod Position Setpoints for 2-Pump Operation
From 30 +10/-0 to 335 +10/-10 EFPD -- ANO-1 Cycle 10
Figure 3.5.2-3B



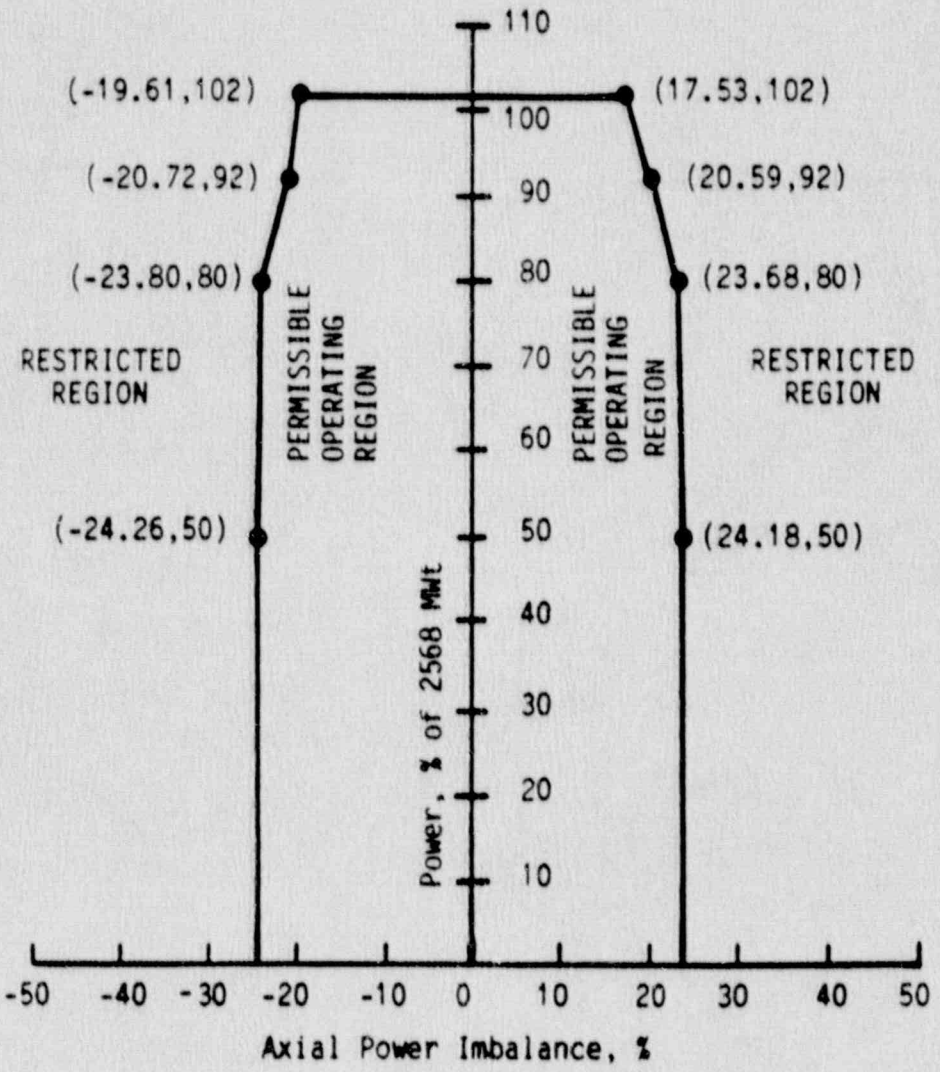
Rod Position Setpoints for 2-Pump Operation
After 335 +10/-10 EFPD -- ANO-1 Cycle 10
Figure 3.5.2-3C



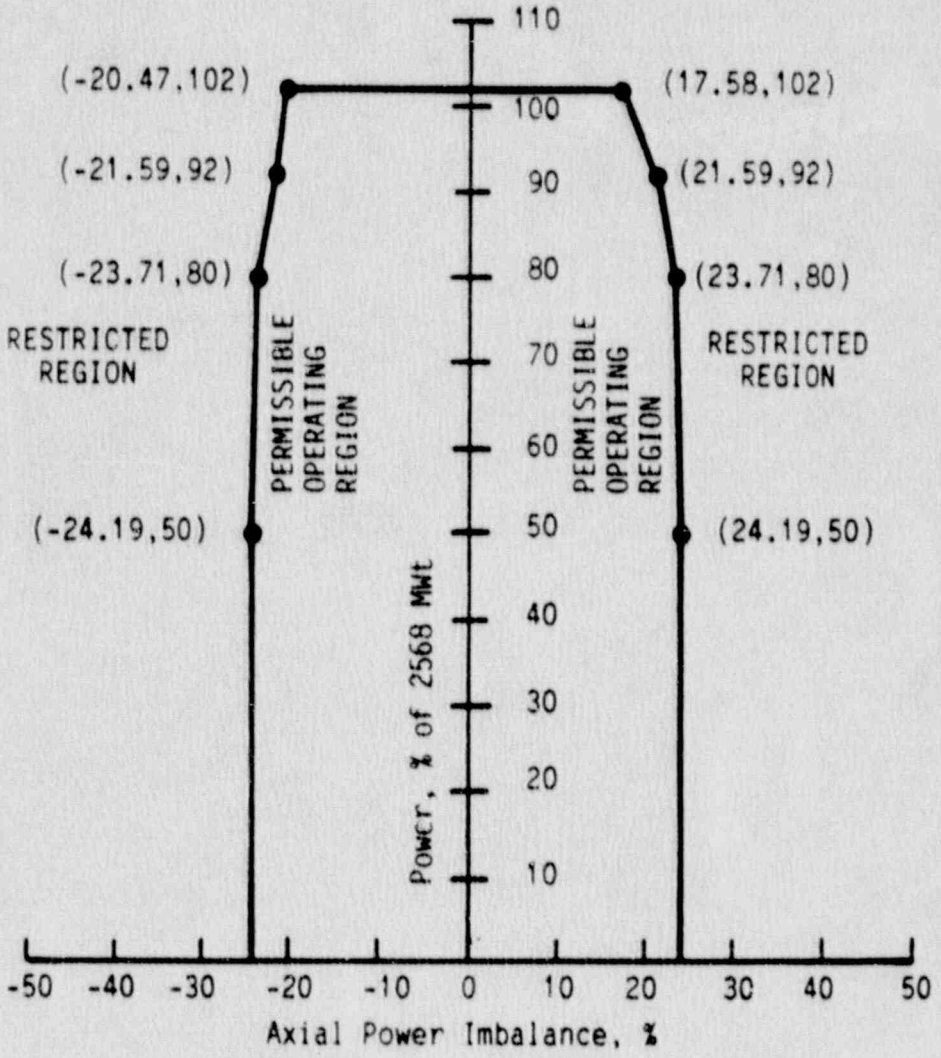
Operational Power Imbalance Setroints for Operation
From 0 to 30 +10/-0 EFPD -- ANO-1, Cycle 10
Figure 3.5.2-4A



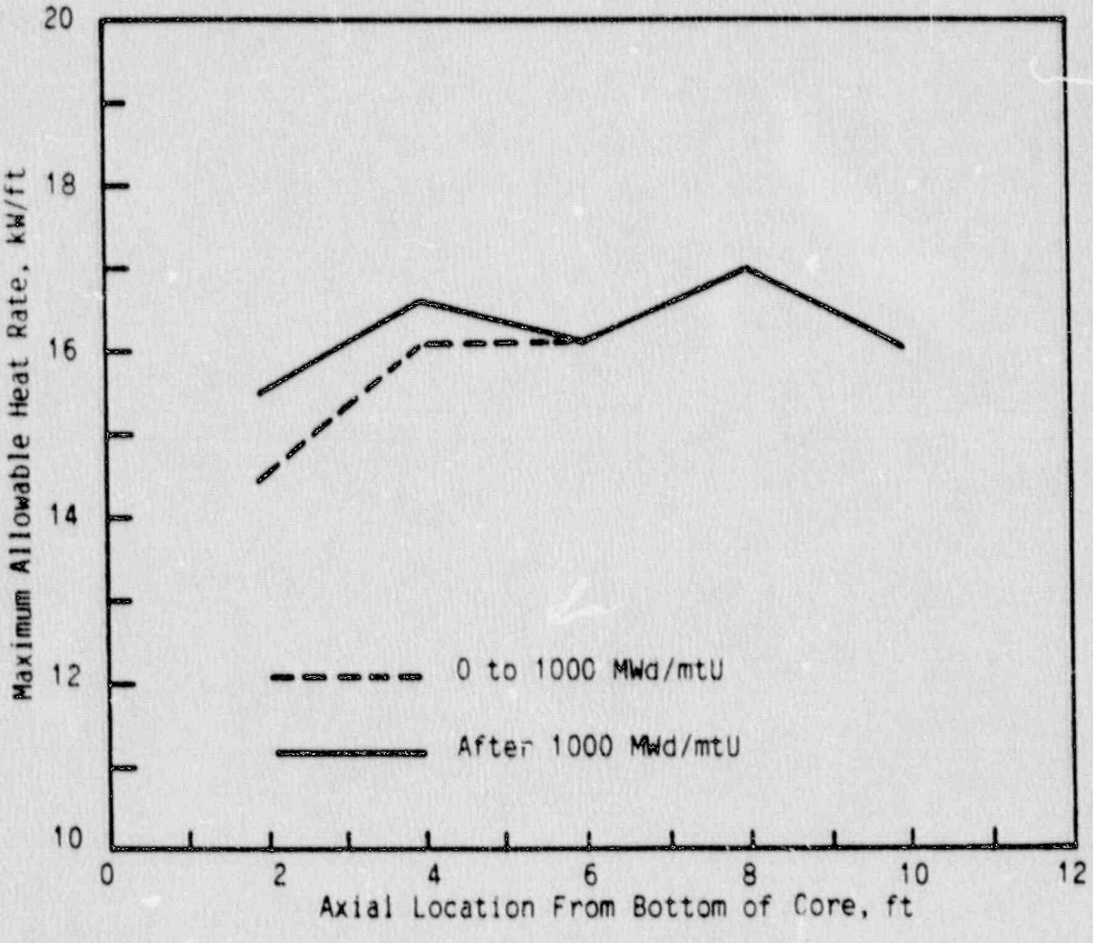
Operational Power Imbalance Setpoints for Operation
From 30 +10/-0 to 335 +10/-10 EFPD -- ANO-1, Cycle 10
Figure 3.5.2-4B



Operational Power Imbalance Setpoints for Operation
After 335 +10/-10 EFPD -- ANO-1, Cycle 10
Figure 3.5.2-4C



LOCA Limited Maximum Allowable
Linear Heat Rate -- ANO-1 Cycle 10
Figure 3.5.2-5



Amendment No. 43, 82, 71, 92, 105, 48n
113,