Duke Power Company
Oconee Nuclear Station

Attachment 1

Proposed Technical Specification Revision
Oconee 1 Cycle 10

Remove These Pages	Insert These Pages
vi	vi
vii	vii
viii	viii
ix	ix
2.1-1 thru 2.1-12	2.1-1 thru 2.1-5
2.3-1 thru 2.3-13	2.3-1 thru 2.3-7
3.1-19a	3.1-19a
3.1-20	3.1-20
3.5-2	3.5-2
3.5-4 thru 3.5-5	3.5-4 thru 3.5-5
3.5-5c	3.5-5c
3.5-12	3.5-12
3.5-15 (3 pages)	3.5-15
3.5-18 (3 pages)	3.5-18
3.5-21 (3 pages)	3.5-21
3.5-24 (3 pages)	3.5-24

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Ms. Helen Nicolaras
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. Heyward Shealy, Chief
Bureau of Radiological Health
South Carolina Department of Health & Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Mr. J. C. Bryant
NRC Resident Inspector
Oconee Nuclear Station

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES (CONT'D)

The rod position limits are based on the most limiting of the following three criteria: ECCS power peaking, shutdown margin, and potential ejected rod worth. Therefore, compliance with the ECCS power peaking criterion is ensured by the rod position limits. The minimum available rod worth, consistent with the rod position limits, provides for achieving hot shutdown by reactor trip at any time, assuming the highest worth control rod that is withdrawn remains in the full out position(1). The rod position limits also ensure that inserted rod groups will not contain single rod worths greater than 0.65% $\Delta k/k$ at rated power. These values have been shown to be safe by the safety analysis (2,3,4, 5) of hypothetical rod ejection accident. A maximum single inserted control rod worth of 1.0% $\Delta k/k$ is allowed by the rod position limits at hot zero power. A single inserted control rod worth of 1.0% $\delta k/k$ at beginning-of-life, hot zero power would result in a lower transient peak thermal power and, therefore, less severe environmental consequences than a 0.65% $\Delta k/k$ ejected rod worth at rated power.

Control rod groups are withdrawn in sequence beginning with Group 1. Groups 5, 6, and 7 are overlapped 25 percent. The normal position at power is for Group 7 to be partially inserted.

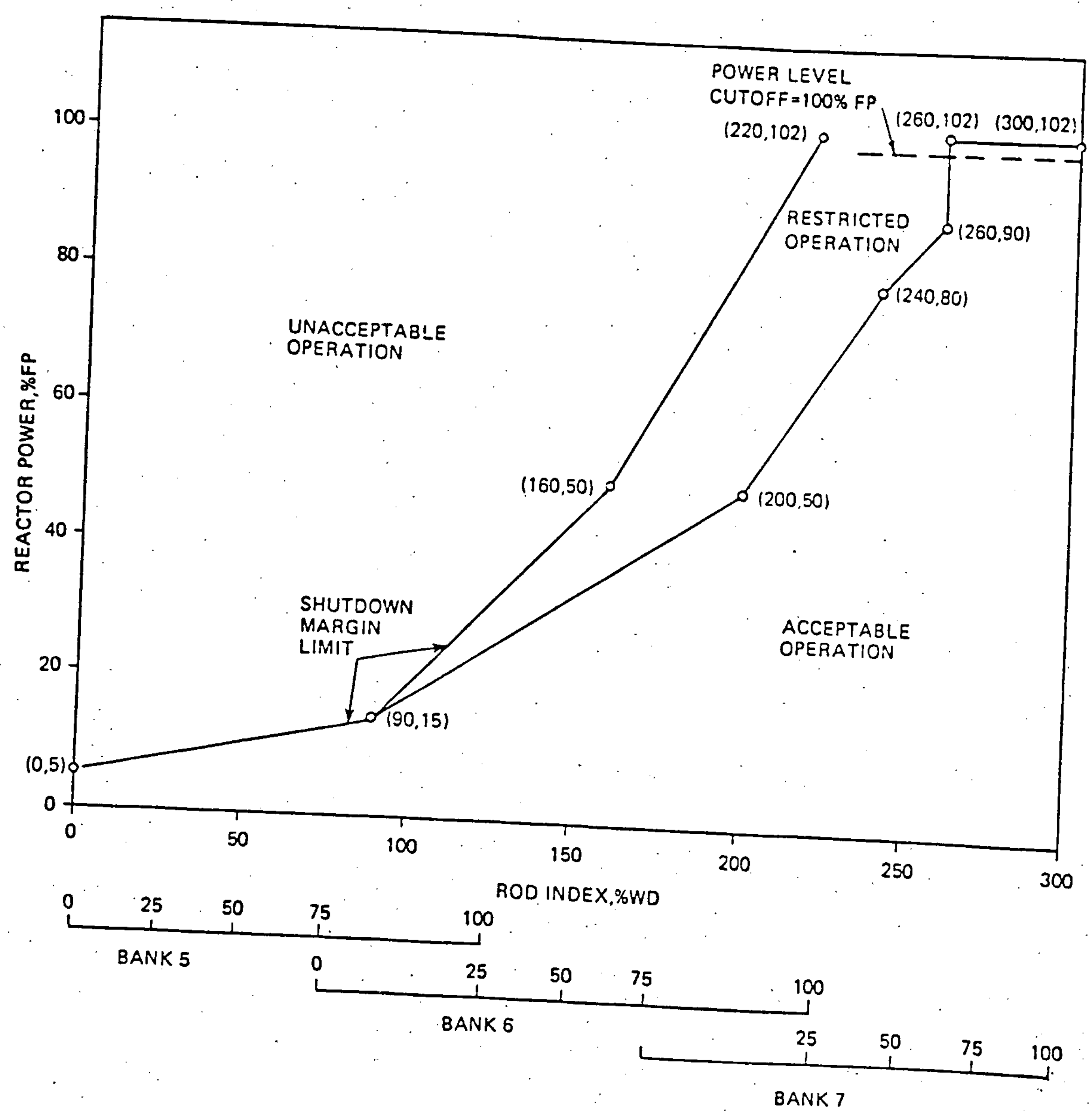
The quadrant power tilt limits set forth in Specification 3.5.2.4 have been established to prevent the linear heat rate peaking increase associated with a positive quadrant power tilt during normal power operation from exceeding
7.50% for Unit 1. The limits shown in Specification 3.5.2.4
7.50% for Unit 2
7.50% for Unit 3
are measurement system independent. The actual operating limits, with the appropriate allowance for observability and instrumentation errors, for each measurement system are defined in the station operating procedures.

The quadrant tilt and axial imbalance monitoring in Specification 3.5.2.4 and 3.5.2.7, respectively, normally will be performed in the process computer. The two-hour frequency for monitoring these quantities will provide adequate surveillance when the computer is out of service.

Allowance is provided for withdrawal limits and reactor power imbalance limits to be exceeded for a period of two hours without specification violation. Acceptable rod positions and imbalance must be achieved within the two-hour time period or appropriate action such as a reduction of power taken.

Technical Specification 3.5.2.6 provides the ability to prevent excessive power peaking by transient xenon at rated power.

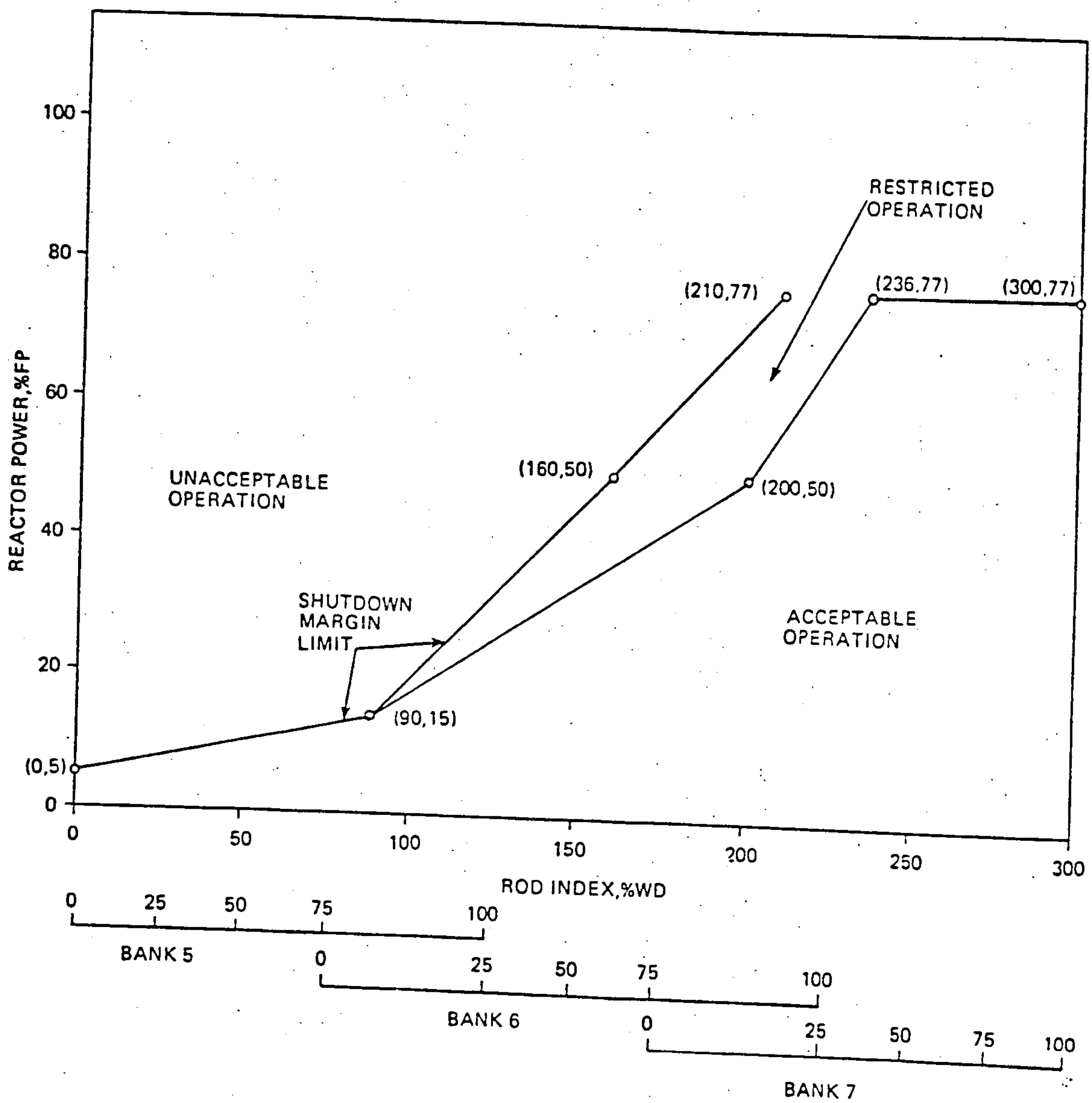
Operating restrictions resulting from transient xenon power peaking, including xenon-free startup, are inherently included in the limits of Sections 3.5.2.5 (Control Rod Positions) and 3.5.2.7 (Reactor power imbalance) for transient peaking behavior bounded by the following factors. For feed and bleed (unrodded) operation, a 5% peaking increase is applied to calculated peaks at equilibrium conditions for powers at and above 90% FP. A 13% increase is applied below 90% FP. For rodded operation an 8% peaking increase is applied at and above 90% FP and an 18% increase is applied below 90% FP. If these values, checked every cycle, conservatively bound the peaking effects of all transient xenon, then the need for any hold at a power level cutoff below 100% FP is precluded. If not, either the power level at which the requirements of 3.5.2.6 must be satisfied or the above listed factors will be suitably adjusted to preserve the ECCS power peaking criteria. (Reference 6)



ROD POSITION LIMITS FOR FOUR PUMP OPERATION
FROM 0 EFPD TO EOC UNIT 1

Figure 3.5.2-1

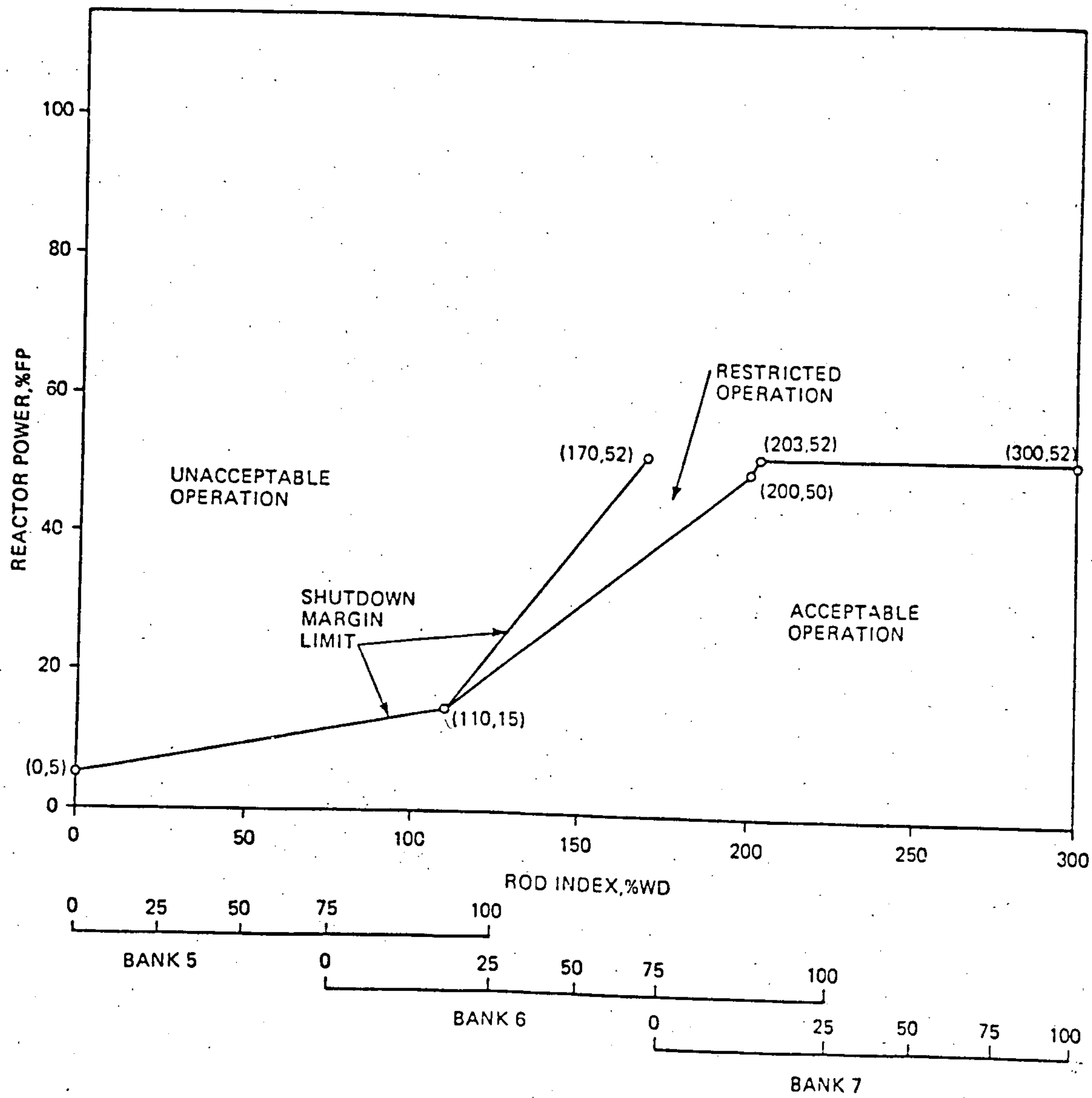
OCONEE NUCLEAR STATION



ROD POSITION LIMITS FOR THREE PUMP OPERATION
FROM 0 EFPD TO EOC UNIT 1

Figure 3.5.2-4

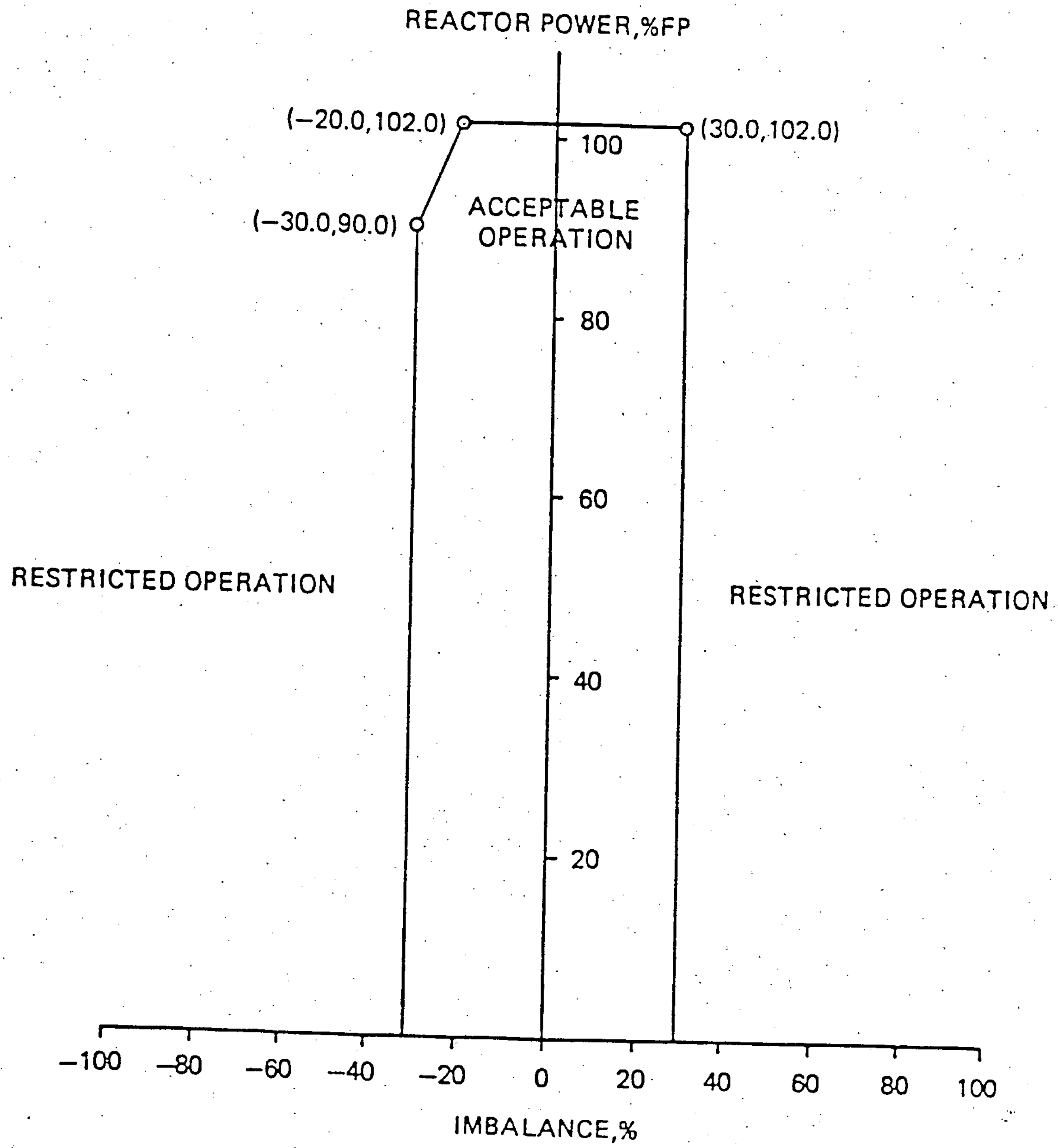
OCONEE NUCLEAR STATION



ROD POSITION LIMITS FOR TWO PUMP OPERATION
FROM 0 EFPD TO EOC UNIT 1

Figure 3.5.2-7

OCONEE NUCLEAR STATION



OPERATIONAL POWER IMBALANCE ENVELOPE
FROM 0 EFPD TO EOC UNIT 1

Figure 3.5.2-10
OCONEE NUCLEAR STATION