

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

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on the maximum inserted rod worth in the unlikely event of a hypothetical assembly ejection and provide for acceptable nuclear peaking factors. The limit may be determined on the basis of unit startup and operating data to provide a more realistic limit which will allow for more flexibility in unit operation and still assure compliance with the shutdown requirement. The maximum shutdown margin requirement occurs at end of core life and is based on the value used in the analysis of the hypothetical steam break accident. The rod insertion limits are based on end of core life conditions. The shutdown margin for the entire cycle length is established at 1.77% reactivity. All other accident analysis with the exception of the chemical and volume control system malfunction analysis are based on 1% reactivity shutdown margin. Relative positions of control rod banks are determined by a specified control rod bank overlap. This overlap is based on the consideration of axial power shape control. The specified control rod insertion limits have been established to limit the potential ejected rod worth in order to account for the effects of fuel densification. The Unit 1 limits have been raised as shown in Figure 3.12-1A to ensure acceptable radial power peaking during Cycle 7 core life. The various control rod assemblies (shutdown banks, control banks A, B, C, and D) are each to be moved as a bank; that is, with all assemblies in the bank within one step (5/8 inch) of the bank position. Position indication is provided by two methods: a digital count of actuating pulses which shows the demand position of the banks, and a linear position indicator, Linear Variable Differential Transformer, which indicates the actual assembly position. The position indication accuracy of the Linear Differential Transformer is approximately $\pm 5\%$ of span (± 12 steps) under steady state conditions. The relative accuracy of the linear position indicator has been considered in establishing the maximum allowable deviation of a control rod assembly from its indicated group step demand position. In the event that the linear position indicator is not

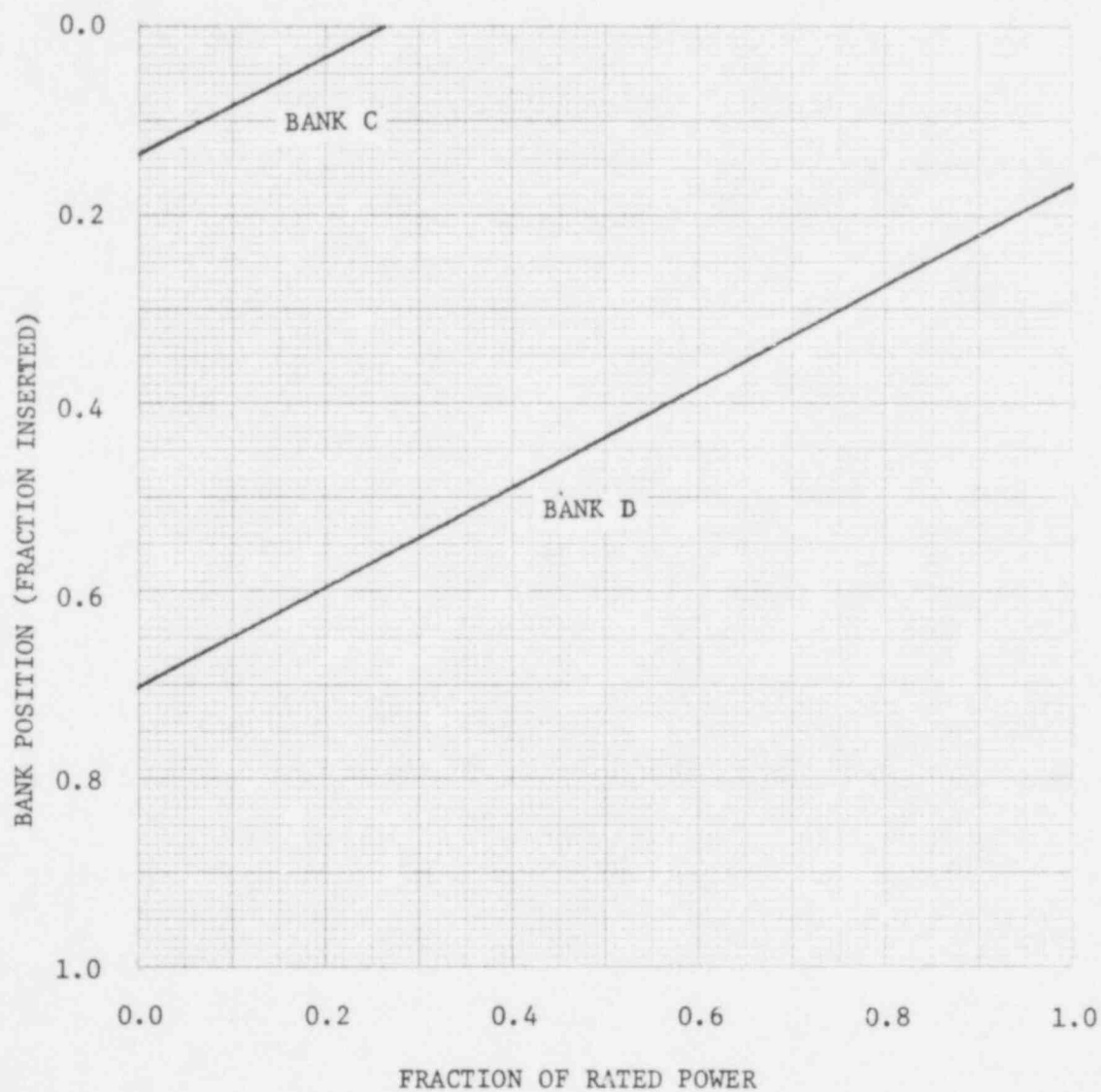


FIGURE 3.12-1A CONTROL BANK INSERTION LIMITS FOR 3-LOOP
NORMAL OPERATION-UNIT 1

ATTACHMENT 2