BASES

3/4.1.3. MOVABLE CONTROL ASSEMBLIES (Continued)

The maximum rod drop time permitted is consistent with the assumed rod drop time used in the safety analyses. Measurement with $T_{avg} \geq 525°F$ and with reactor coolant pumps operating ensures that the measured drop times will be representative of insertion times experienced during a reactor trip at operating conditions.

Control rod positions and OPERABILITY of the rod position indicators are required to be verified on a nominal basis of once per 12 hours with frequent verifications required if an automatic monitoring channel is inoperable. These verification frequencies are adequate for assuring that the applicable LCO's are satisfied. A 1.5% group average position uncertainty is applied to the rod index curves. Therefore, the position indicators must be capable of supporting this accuracy. The Surveillance Requirement ensures this accuracy by keeping the RPI calibrated to a "known" position as indicated by the API. Using the API as a "known" position is valid provided two consecutive reed switches are not inoperable. Having one entire string (i.e., every other reed switch) inoperable is acceptable.

A specific surveillance of the reed switches is not required because:

1) When one or more reed switch fails closed, a large API indication of asymmetry occurs.

2) Two failed open reed switches in series result in a large indication of asymmetry.

3) Failed open reed switches not in series (up to every other switch) are bounded by the analysis.

Therefore, a reed switch condition not bounded by the analysis will be indicated by API system asymmetry indications.

Technical Specification 3.1.3.8 provides the ability to prevent excessive power peaking by transient xenon at RATED THERMAL POWER. Operating restrictions resulting from transient xenon power peaking, including xenon-free startup, are inherently included in the limits of Sections ~~3.1.3~~ 3.1.3.6 (Regulating Rod Insertion Limits), 3.1.3.9 (Axial Power Shaping Rod Insertion Limits), and 3.2.1 (Axial Power Imbalance) for transient peaking behavior bounded by the following factors. For the period of cycle operation where regulating rod groups 6 and 7 are allowed to be inserted at RATED THERMAL POWER, an 8% peaking increase is applied at or above 92% FP. An 18% increase is applied below 92% FP. For operation where only regulating rod group 7 is allowed to be inserted at RATED THERMAL POWER, a 5% peaking increase is applied at or above 92% FP and a 13% increase is applied below 92% FP.

3/4.1.3. MOVABLE CONTROL ASSEMBLIES (Continued)

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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 RATED THERMAL POWER is precluded. If not, either the power level at which the requirements of Section 3.1.3.8 must be satisfied or the above-listed factors will be suitably adjusted to preserve the LOCA linear heat rate limits.

The limitation on axial power shaping rod insertion is necessary to ensure that power peaking limits are not exceeded.