

**ANS Issues Clarification on ANSI/ANS-19.6.1-2005, "Reload Startup Physics Tests for Pressurized Water Reactors."**

**(Nuclear News, November 2010)**

**INQUIRY:**

I would like to get a clarification on the initial condition described in ANSI/ANS-19.6.1-2005 for flux symmetry measurements. Initial conditions of flux symmetry measurements do not require the xenon concentration condition. If the test will be performed at a higher power level (more than 15%), xenon concentration will affect test results. What is the background that xenon concentration is not considered?

**RESPONSE:**

The flux symmetry test was initially required to be performed at or near zero power. However, to accommodate some utilities with fixed incore detectors, the power level requirement was gradually raised to as much as 30% of full power in later revisions. In the committee's experience, xenon conditions were not a major consideration for the low power symmetry check. Power levels of 50% and higher result in making the xenon conditions more significant, therefore, making the specific xenon requirements more important. If the xenon conditions are a concern, specific guidelines for xenon stability for the flux symmetry test should be developed based upon a plant specific assessment of the incore instrumentation system and the impact on the power distribution by the xenon conditions.