

Staff's Statement of Concern on Method 3 of ISA Standard 67.04 Part II

The industry position is that technical specification (TS) Allowable Values (AVs) are used during periodic surveillances to demonstrate channel operability by validating the respective trip setpoint (TSP). In addition, the TSP protects the Analytical Limit, and therefore the Safety Limits in plant safety analyses. The TS periodic tests used to validate instrument channel uncertainties are the Channel Operational Test (COT) and Channel Calibration (non-COT) tests. These tests are used to establish operability of different components of an instrument channel. The staff concern is that the industry position on the relationship of the TSP to the AV does not address underlying assumptions of TS operability and setpoint methodologies to validate non-COT uncertainties.

Specifically, the underlying assumption for the non-COT uncertainty is that there will be a 95/95 confidence that instrument readings are conservative with respect to the Analytical Limits. The non-COT uncertainty must be accounted for in the safety margin at all times. Method 3 invalidates the non-COT uncertainty assumptions by setting the AV closer to the Analytical Limit and thereby the Safety Limit. Thus it does not preserve the safety margin by accounting for the total non-COT uncertainties. This is because AVs calculated using Method 3 set the AV at a value which assumes that all of the COT uncertainties are accounted for verifying the operability of the TSP, independent of the non-COT uncertainty, even though the two uncertainties were previously combined to establish the total channel uncertainty used to establish the TSP. Therefore, the staff does not believe that AVs calculated using Method 3 establish instrument channel operability limits that preserve the 95/95 confidence that structures, systems and components will be actuated to perform their intended safety function(s).