

1 Purpose

The purpose of this standard is to define the bases for establishing safety-related and other important instrument setpoints associated with nuclear power plants and nuclear reactor facilities.

2 Scope

This standard defines the requirements for assessing, establishing, and maintaining nuclear safety-related and other important instrument setpoints associated with nuclear power plants or nuclear reactor facilities. The scope includes instrumentation-based setpoints that assure compliance to one or more design limits.

3 Definitions

3.1 Analytical limit (AL):

limit of a measured or calculated variable established by the safety analysis to ensure that a safety limit is not exceeded.

3.2 As-found:

the condition in which a channel, or portion of a channel, is found after a period of operation and before recalibration (if necessary).

3.3 As-left:

the condition in which a channel, or portion of a channel, is left after calibration or final setpoint device setpoint verification.

3.4 Design basis:

the design basis for protection systems is as defined in Part 4, Safety system design basis, of IEEE Standard 603-1980. (See IEEE Std. 603.)

3.5 Drift:

a variation in sensor or instrument channel output that may occur between calibrations that cannot be related to changes in the process variable or environmental conditions. (ANSI/ISA-67.06.01-2002)

3.6 Error:

the arithmetic difference between the indication and the ideal value of the measured signal. (See ANSI/ISA-51.1-1979 [R1993].)

3.7 Final setpoint device:

a component, or assembly of components, that provides input to the process voting logic for actuated equipment.

NOTE — Examples of final setpoint devices are bistables, relays, pressure switches, and level switches.

3.8 Instrument channel:

an arrangement of components and modules as required to generate a single protective action signal when required by a plant condition. A channel loses its identity where single protective action signals are combined. (See IEEE Std. 603.)

3.9 Limiting safety system setting (LSSS):

“Limiting safety system settings for nuclear reactors are settings for automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that