

Method 3 Issue

BFN Proposed Resolution

NRC ISSUES

- 1) Need method to ensure licensee adheres to approved setpoint methodology.
- 2) Need control to ensure licensee performs timely reset/re-calibration of instruments found out of tolerance (outside allowable as-left (AAL) range).
- 3) Need control to ensure licensee performs timely reset/recalibration of instruments found out of tolerance (outside allowable as-found (AAF) range).
- 4) Need control to ensure licensee evaluates in a timely manner the operability of instruments found outside of AAF range.
- 5) Need control to ensure licensee evaluates unacceptable out of tolerance trends.

TVA ISSUES

- 1) Need method to make non-technical changes and conservative methodology changes under 10CFR50.59 process without a Technical Specification change.
- 2) Need process for resetting/recalibrating instruments without placing instrument channel in a tripped condition if instrument found outside AAF range.
- 3) Need reasonable time period for addressing past operability and setpoint drift trends.
- 4) Allow continued use of ISA Method 3 for setpoint determination.
- 5) Allow TVA at a future date to revise, if desired by TVA, the below agreement in accordance with the generic issue resolution.

PROPOSAL

- 1) In BFN Technical Specifications Section 5.0 "Administrative Controls" add a section which states the following:

Instrument setpoints are determined using the methodology defined in TVA procedure TI-28, "Setpoint Calculations". The methodology for determining the nominal trip setpoint (NTSP), allowable as left (AAL) range, allowable as found (AAF) range and allowable value (AV) (i.e., Technical Specification value) has been reviewed and approved by the NRC (References ??, ?? and ??) and is an NRC requirement.

During instrument calibration, any LSSS instrument for a variable upon which a Technical Specification Safety Limit has been placed found outside the AAL range will be immediately reset within the AAL range and verified to function as expected. Operations will be immediately notified of instruments outside the AAF range and the deficient performance will be documented in the corrective action program. An instrument outside the AAF range will not be declared operable until successfully reset within the AAL range and an evaluation performed to verify that the instrument will perform in accordance with design basis assumptions. After the instrument has been declared operable, the corrective action program will address out of tolerance trends as well as the impact on past operability when the instrument was out of tolerance in accordance with 10CFR50.36 Section (c)(1)(ii)(A). The out of tolerance trend and past operability evaluations shall be completed within 25 percent of the next surveillance interval not to exceed 31 days.

- 2) In the BFN Technical Specifications Section 5.0 "Administrative Controls", directly reference the NRC Safety Evaluation Report (SER) that approved the TVA methodology. This is included in item 1 above.

- 3) For all instruments related to Limiting Safety System Settings for a variable upon which a Technical Specification Safety Limit has been placed as defined by 10CFR50.36 Section (c)(1)(ii)(A)), add a reference to the above requirement in BFN Technical Specifications Section 5.0 "Administrative Controls".
- 4) In the Technical Specification Bases for Section 5.0 "Administrative Controls", add the following:
 - 1) Bases for Instrument Reset – The requirement to reset during Channel Calibration ensures that the channel is maintained within the design basis uncertainty analysis and verifies that the channel conforms to the expected performance criteria such as repeatability, hysteresis, deadband, etc.
 - 2) Bases for Immediate Operability – The Channel's (all devices of the channel) ability to operate within the Acceptable As Left (AAL) range ensures that the Channel is Operable.
 - 3) Bases for Long Term Operability – Any Channel or individual devices of the Channel found outside of the Acceptable As Found (AAF) range shall be documented as a test deficiency and entered into the Corrective Action Program. The test deficiency shall be evaluated within 25% of the next surveillance interval not to exceed 31 days from the initiation of the Corrective Action documentation.

DISCUSSION

NRC ISSUE 1

Even though the licensee has an NRC SER for the setpoint methodology, the NRC has no means to control changes to the methodology. If the utility deviates from the methodology, the NRC cannot issue a violation for not following the SER. Referencing the SER in the Technical Specifications allows the NRC to issue a violation for not following the Technical Specifications if unacceptable methodology changes occur.

NRC ISSUE 2 AND 3

The statement in the Technical Specification will require an immediate reset of out of tolerance instruments. In general, instruments are not operable while they are undergoing calibration/recalibration; therefore the Instrument would be reset before being declared operable.

NRC ISSUES 4 AND 5

The reset process will ensure the instrument is functioning properly before it is declared operable. A totally failed instrument would either fail high, fail low or fail as is and would not be capable of being successfully reset; therefore, it would be unlikely that a non-functioning instrument could be returned to an operable status. Instrument drift is a slow process. Once the instrument is reset, it will function as designed if called upon. Since drift is slow, it is not expected to exceed the AAL within 25 per cent of the surveillance interval. Therefore the instrument will perform its design function if called upon during the evaluation period. The statement in the Technical Specifications will require trending and ensure the timely addressing of impact on past operability.

TVA ISSUE I

By only referencing the NRC SER in the Technical Specifications, the licensee can make non-technical and/or conservative methodology changes for the setpoint procedure under the 10CFR50.59 process. Conservative changes would be defined as those that move the setpoint and/or allowable ranges further from the associated safety limit. This would increase the margin of safety.

TVA ISSUE 2

The immediate reset and documentation in the corrective action program (if required as described above) would allow continued operation without placing an instrument channel in a tripped condition. Thus no off-normal alignments would be created. Tripping of channels through either normal switches or jumpers introduces the possibility of human error and spurious plant/system trips and actually reduces plant safety compared to merely quickly resetting the instrument. Instruments are in general not operable while undergoing calibration. The instrument would be maintained in a non-operable status until the successful reset.

TVA ISSUE 3

Allowing 25 percent of the next surveillance interval not to exceed one month allows a reasonable time period for trending and addressing past operability issues. Since drift is slow, it is not expected to exceed the AAL within 25 per cent of the surveillance intervals. Therefore the instrument will perform its design function if called upon during the evaluation period.

TVA ISSUE 4

ISA Method 3 would continue to be used thus eliminating the need for large Unit 1 restart documentation changes. Additionally, all BFN Technical Specifications would maintain a consistent technical basis.

TVA ISSUE 5

TVA would evaluate any generic resolution for possible inclusion in the future.

The evaluation process for instruments outside the AAF range may include a number of factors to provide confidence that the channel is functional, such as:

- an evaluation of previous history (is it the first out-of-tolerance condition, or have there been previous occurrences for the instrument in question)
- the magnitude of change per unit time,
- the response of the instrument to reset,
- the repeatability of instrument response,
- effects of extreme or seasonal ambient environmental changes (temperature, pressure, etc.),
- human performance or M&TE errors during the current (or previous) calibrations,
- first-time pressure set or deformation on a diaphragm (for a newly installed instrument),
- induced errors due to response time variations of the calibration input (for example, a thermal dispersion level measurement has a faster response time going from dry to wet than from wet to dry),
- known physical characteristic changes due to environment, or

The evaluation, combined with resetting the trip setpoint, permits the channel to be returned to service. The specifics of the assessment need not be included in the Tech Specs or Bases. The corrective action program would be used to track assessments and define the threshold for trending. The program is sufficiently robust to provide confidence that anomalies will be identified, tracked and resolved.