

# Operability Determination Process- Benefits to the Control Room Staff

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# Introduction



- Benefits to the Control Room Staff
- Proof of Concept Testing

## Benefits to the Control Room Staff



- Establishes Clear and Predictable Entry Criteria for documenting Operability Determinations
  - ◆ Three Required Entry Criteria
- Senior Reactor Operators (SROs) will focus their efforts on reviewing and documenting Operability Determinations on conditions that have a functional impact on Technical Specifications Structures, Systems, and Components (Safety Significance)
  - It is not uncommon to document Operability Determinations many times per shift. This is done by an on-shift SRO
- Increases time available to focus on other activities that promote Safe Plant Operations

## Three Required Entry Criteria



- The documented Operability Determination Process will be entered when all three of the required entry criteria are satisfied
- If all three of the required entry criteria are not met, the Presumption of Operability is retained
  - All issues continue to be addressed through CAP or other applicable process
- Senior Reactor Operators (SROs) will always retain the option of requesting documented Operability Determinations

## Three Required Entry Criteria



1. The deficient condition must affect a TS SSC installed in an operating unit.
2. The deficient condition must have a functional impact on the SSC. This includes the ability to perform required functions under postulated, off-normal design conditions.
3. The functional impact of the deficient condition must be substantive (i.e. non-trivial).

## Three Required Entry Criteria



1. The deficient condition must affect a TS SSC installed in an operating unit.
  - ◆ TS SSC is an SSC that has a functional impact on either;
    - A Specified Safety Function or,
    - A Required and Necessary Support Function
  - ◆ If the SSC is not installed in the plant, this criterion is not met
  - ◆ Procedure or Design errors that affect the operation of a TS SSC would meet this criterion

## Three Required Entry Criteria



2. The deficient condition must have a functional impact on the SSC. This includes the ability to perform required functions under postulated, off-normal design conditions.
  - ◆ There must be direct evidence that a functional impact exists or,
  - ◆ Indication that a functional impact would be manifest under off-normal/accident conditions

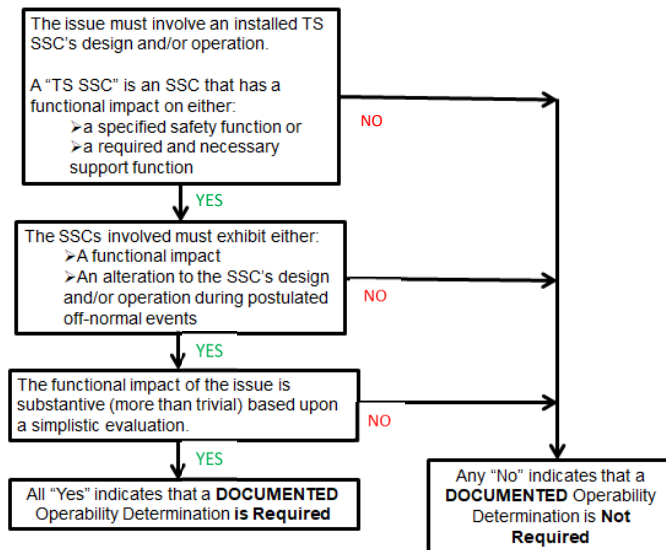
## Three Required Entry Criteria



3. The functional impact of the deficient condition must be substantive (i.e. non-trivial).
  - ◆ Substantive (more than trivial) means:
    - The functional impact is observable or;
    - The deviation from as-designed values is more than 10%
  - ◆ This Criterion acknowledges that SSCs are designed, licensed, and installed with substantial margins
  - ◆ Assumes available margin (e.g. as-designed value) is amenable to an estimate



# Three Required Entry Criteria Flowchart



## Proof of Concept Testing



- Two Rounds of Testing
  - Duke Energy (June, 2017)
  - First Energy (August, 2017)
  
- In total, 13 SROs representing 8 sites reviewed over 2000 previously identified issues applying the “Three Required Entry Criteria”
  - ~70% reduction in the number of issues requiring a documented operability determination
  - No conditions identified that would have missed documenting an operability determination when required

## Proof of Concept Testing



- Feedback from the SROs were very positive
  - Liked the structured approached
    - ◆ Current process is subjective and time consuming
  - The “Three Required Entry Criteria” approach was easy to learn and apply
    - ◆ Received 3 hours of training and could easily implement the process
  - Reduced some of the administrative burden allowing them to focus more time on overseeing other aspects of Safe Plant Operations
    - ◆ Increased focus on issues that could have an impact on Operability

## Summary



- Establishing the “Three Required Entry Criteria” allows for a structured and consistent approach when determining conditions that require a documented operability determination.
- Administrative burden will be reduced by shift crew SROs when reviewing issues at their station allowing increased focus on other shift crew activities supporting safe plant operations.
- SROs will focus their efforts on reviewing and documenting operability determinations on conditions that have a functional impact on a TS SSC.
- Assessment of Operability is a continuous process (no change). If CAP or other processes determine that a deficient condition exists or there is a change in functional impact, the condition will be screened using the “Three Required Entry Criteria.”

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