Technical Specification Bracket Items

NRC – ESBWR DCWG Meeting

April 10, 2008

Technical Specification Bracket Items: Discussion Topics

- ESBWR DCWG philosophy regarding Technical Specification brackets
- Where we are today regarding closure of Technical Specification brackets
- Conclusions

ESBWR DCWG Perspective on Tech Spec (TS) Brackets

- Goal: Minimize TS brackets to the extent possible given the level of design, procurement, and installation information available
- SRP 16.0 – addresses TS brackets:
  - *At the PSAR or COL application stage, numerical values, graphs, and other data (denoted by brackets in STS Section 16.0 and the generic DCD) are not as complete as necessary for plant operation because of the preliminary nature of the plant design or because determination of specific numerical values is pending future decisions by the licensee on selection and procurement of hardware after issuance of the construction permit or the COL*.
  - Evaluation Finding #4 specifies a license condition for open TS bracket items

ESBWR DCWG Perspective on Tech Spec (TS) Brackets

- RG 1.206, C.III.16.2 – similarly addresses TS brackets:
  - *Plant-specific TS numerical values identified in brackets in the certified generic TS should be included in the TS proposed in the COL application to the extent such information is available when the application is submitted*.
- RG 1.206, C.III.4.3 specifies the use of a license condition for COLA items that cannot be addressed by COL issuance (references TS as an example)

ESBWR DCWG Perspective on Tech Spec (TS) Brackets (cont.)

- Different vendor DCDs and associated COL applications vary with respect to numbers of TS brackets remaining at certification stage and at COL issuance stage
  - From zero to 169 TS brackets depending on level of design and procurement information available
- Level of design in the DCD that is necessary for certification should be sufficient to satisfy RG 1.206 guidance for “generic” TS
  - Procurement level design detail should not be required to obtain a COL
- Inserting “placeholder” values that are not supported by the DCD safety basis documentation into the “open” brackets may not substantially enhance the safety determination either at certification stage or COL issuance

DCD Revision 5 Disposition of TS Brackets

- Closed in Revision 5 (Majority)
  - PRA References for SR Frequencies and Action Completion Times
  - Draft Flexibilities Not Supported by Analyses
  - Design Detail Now Included in DCD ... often from NRC RAI Responses
- COL- Applicant Items
  - Site-Specific Information
  - Operational Flexibility
    - Removed at COLA
    - Used at Later Date

DCD Revision 5 Disposition of TS Brackets (cont)

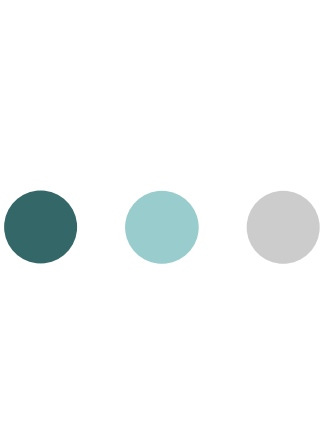
- COL-Holder Items
  - Installed Equipment Characteristics
    - Battery Parameters for Operability Monitoring
    - Allowable Values Depend on Specific Sensors, M&TE, Installation Detail
    - SRV testing – manufacturer-recommended steam pressure/flow testing conditions
  - ITAAC-related
    - Testing Feedback Needed to Inform CRD Accumulator Pressure Limit

RAI 16.2-164: Disposition of TS Brackets

- Reviewer's Notes For All Brackets
  - Tables Added to 16.00, Introduction
  - Cross-Ref Labels to Numbered COL Table Items Added to TS & Bases
- Example COL-H Bracketed Item
  - Battery Parameters for Operability Monitoring (TS Bases 3.8.3)
    - A fully charged condition is achieved when [charging current has stabilized as indicated by three consecutive hourly current readings changing by < [0.5] amps while the battery voltage is being maintained within the limits of SR 3.8.1.1. Alternately, a fully charged condition is achieved when the float current is < [5.0] amps while the battery voltage is being maintained within the limits of SR 3.8.1.1. Either method verifies that a partially discharged battery has been fully recharged.]
    - ... [266.8] V at the battery terminals, or [2.24] Vpc at 25°C (77°F). This provides adequate overpotential, which [limits the formation of lead sulfate and self-discharge, which could eventually render the battery inoperable]. Float voltages below 2.18 vpc at 25°C (77°F) but greater than [2.14] Vpc, are addressed in Specification 5.5.10.

Conclusions

- DCD TS brackets are being eliminated in the “generic” TS to the extent practicable through DCD revision process
- TS Brackets identified as COL Applicant Items will be completed in the COLA
- Remaining TS bracket (Holder) items are consistent with the guidance of RG 1.206, Sections C.III.16.2 and C.III.4.3
- Using a license condition is an established method to enforce closure of open items



Questions?