Plant-Specific Technical Specifications Information that Applicants Must Provide to Support COL, and potential use of ITAAC

Bob Tjader
Senior Reactor Engineer
Technical Specifications Branch

May 13, 2009

Act and Regulations

- The Atomic Energy Act (the act) requires the Commission to issue technical specifications with a license that are necessary to provide adequate protection to the health and safety of the public.

- The Commission has identified what is the necessary content of technical specifications through 10 CFR 50.36 and the Generic Technical Specifications (GTS) approved with design certification.

- The Combined License (COL) applicant needs to complete the TS at COL issuance; the necessary content must be in the Plant Specific Technical Specifications (PTS) at COL issuance.

- The NRC staff has flexibility in accepting different ways of incorporating the necessary content in technical specifications, but does not have the flexibility to allow COL applicants to defer (e.g., holder items, license condition) including and in some cases confirming, if incorporating the GTS, that the necessary content is in the PTS.

Typical Reasons for Requesting Holder to Provide Info

- For example, needed information that may not be available prior to COL issuance depends on:
  - Equipment procured
    - RPV material properties to determine PT limit curves;
    - Uncertainties for calculating instrumentation channel trip settings
  - Manufacturer recommendations
    - Battery cell parameters and battery testing criteria
  - As built installation
    - Uncertainties for calculating instrumentation channel trip settings
    - Diesel generator operating parameter limits
  - Pre-startup test results
    - Control rod scram accumulator pressure limits;
    - Control rod drop time limits

Options Available to Applicants

- Options for incorporating Technical Specifications (TS) requirements at the time COL is issued:
  - Use plant-specific value
  - Use value that is bounding to plant-specific value
  - PTS Section 5.5 program specifying use of NRC approved methodology; relocate value to a specified document controlled per § 50.59 by licensee (e.g., a setpoint control program)

Comanche Peak Proposed PTS

- Proposed Comanche Peak (CP) Schedule is for COL to be Issued December 2011
- TS shall be complete at COL issuance
- Proposed CP TS include Risk-informed (RI) TS initiatives on RI Completion Times (CT) and Surveillance Frequency Control Program (SFCP)

Use of TS Methodologies

- Risk-Informed Technical Specifications
  - NEI 06-09, Risk-Informed Completion Times
  - NEI 04-10, Surveillance Frequency Control Program
- PRA Quality
  - Site specific/as built
  - Peer reviews
  - Application-specific
- Set-Point Program/Methodology

New Reactor Operating Requirements

- Methodology documents NEI 06-09 and NEI 04-10 contain PRA quality/capability requirements and procedural requirements
- The specific requirements that are not derived at the time of the COL issuance must be fully described in scope and detail by approved methodologies
- TS Methodologies must be completed and approved at time of COL issuance

PRA Quality Verification Process

DC Application

- Self-assessment of PRA
- NRC staff review and comment
- Final list of proposed PRA upgrades/updates

COL Application

- Site-specific information added to PRA
- NRC staff review and comment
- Additional PRA upgrades/updates, as necessary

Post COL Issuance
(prior to fuel load)

- PRA upgrades/updates implemented (e.g., as-built information, procedures, etc.)
- Peer review performed Peer review results resolved
- NRC staff PRA quality assessment and audit, if necessary

Methodologies Need to be Adequately Implemented

- Post COL issuance check for adequate methodology implementation, to be
  - Imbedded in methodology, OR
  - Use ITAAC, OR
  - Inspected Prior to Fuel Load
  - OR ?
- Comments?

Back-up Slides

- Back-up Slides Follow

Atomic Energy Act

- § 182a of the Atomic Energy Act

  In connection with applications for licenses to operate utilization facilities, the applicant shall state such technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, **deem necessary** in order to enable it to find that the utilization of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. **Such technical specifications shall be a part of any license issued.**

Current Regulatory Guidance

- Regulatory Guide 1.206, C.III.4.3
  - COL information items that cannot be resolved before the issuance of a license
  - Suggests resolving a COL information item with a license condition that includes an appropriate implementation schedule
  - SRP Chapter 16.0 contains a model license condition to implement the guidance

Current Operating Reactor Requirements

- Methodology documents for RICT, NEI 06-09, and for SFCP, NEI 04-10, are specified in TS, and require a quality PRA and quantified risk assessments

- NEI 06-09 and NEI 04-10 written for current operating reactors and invoke quantified risk metrics consistent with RG 1.174 and RG 1.177