NEI 04-01, Revision D

Draft Industry Guideline for Combined License (COL) Applicants Under 10 CFR Part 52

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Format and Content of FSAR Chapter 19

- FSAR Chapter 19 Provides Summary of Plant-Specific PRA
- Detailed Disposition of COL Items and Plant-Specific PRA Retained by Licensee and Available for Audit

- Staff Agrees in General with Approach
  - FSAR Chapter 19 Needs to be a Substantial Summary Report
  - PRA Event Tree/Fault Tree Model Needs to be Provided as Part of COLA, but not Part of FSAR Chapter 19

Format and Content of Plant-Specific PRA

- Scope of Plant-Specific PRA Consistent with Design PRA
- Quality of Plant-Specific PRA Reflects Prevailing Standards at Time of COL Minus 6 Months
- Maintenance of Plant-Specific PRA Consistent with Prevailing Standards at Time of COL Minus 6 Months

- Staff Agrees in General with Approach
  - PRA Should be Expanded Based on Available Information (e.g., Incorporate Site Information in Seismic PRA)
    - PRA Should Use PRA Techniques Versus Margins or Vulnerability Screening Type Approaches Whereever Possible
  - Need to Address Quality/Maintenance for Areas Without Standards

Availability of Plant-Specific PRA-Related Documentation

- FSAR Chapter 19 Includes PRA Summary Report
- Detailed Report and Calculation Files Retained By Licensee and Available of Audit

- Staff Agrees in General with Approach
  - FSAR Chapter 19 Needs to be a Substantial Summary Report
  - PRA Event Tree/Fault Tree Model Needs to be Provided
    - Required by 10 CFR Part 52
    - Use as part of initial review to increase familiarity with design and model
    - Perform independent sensitivity studies

Phased Development of Chapter 19 and Plant-Specific PRA

- Pre-COLA to COLA, Chapter 19 Provides Summary of Status and Plans for COL Items and PRA
- COLA to COL Approval, NRC Review and Applicant Responses to RAIs
- COL Approval to Fuel Loading, Chapter 19 and PRA Completed As Information Available
- Post-Initial Operation, Chapter 19 and PRA Updated as Appropriate

- Staff Agrees in General with Approach
  - Prior to Startup Need to Provide PRA Model Reflecting As-Built, As-To-Be-Operated Plant
  - Need to Maintain PRA per Standards and Establish PRA Update Frequency

Preliminary Staff Comments on Draft NEI 04-01

- **Positive Aspects:**
  - Recommends Full-Scope COL PRA
  - Compliance with PRA Quality Standards
  - Phased Updating of PRA

- **General Comments:**
  - Focused only on ALWR, other designs not addressed
  - Relies heavily on AP-1000 information - COL items can differ
  - Chapter 19 tables do not recognize phased approach to PRA updates - supplemental guidance needed on how applicant identifies changes applicable to COLA PRA update and for treating COL items
  - Should encourage use of PRA techniques as opposed to margins or vulnerability screening approaches

Preliminary Staff Comments on Draft NEI 04-01 (continued)

- **General Comments:**
  - No guidance or criteria for identifying changes to be considered in PRA updates or screened out
  - Allows screening some changes from PRA, while Staff expects final PRA at plant startup to reflect as-built, as-to-be-operated plant - instead of screening need guidance and criteria developed for DEFERRING changes during pre-startup phases
  - Fire and flooding walkdowns needs guidance developed
  - Guidance states PRA is not part of COLA - but10 CFR Part 52 requires PRA submittal
  - Scope of Updates should include importance, senstivity, and uncertainty analyses and may require repeating previous thermal-hydraulic analyses

Preliminary Staff Comments on Draft NEI 04-01 (continued)

- **General Comments (ESP/SAMDA):**
  - COL applicant must verify ESP environmental impacts still bounded by design considered in ESP review and SAMDA evaluations still valid (§ 4.6.5)
  - Need clarifications for severe accident issues (§ 6.2.2.1)
    - Concept of Credible is Not Consistent with Staff View
    - Severe Accident Screening CDF is Too High and Does Not Address Cumulative Contribution
    - 10 CFR 50.34(a)(1)(i) (D) Dose Criterion Needs to be Reconsidered as Changes to CDF Typically Do Not Impact Dose - Only Systems Credited for Fission Product Removal/Containment Integrity Impact Dose Calculations
    - Change in Dose/Uncertainty Criterion is Not Well Defined and Could be Used to Permit Significant Changes to be Made to Design
    - Criteria for Dose at Exclusion Area Boundary is Not Clear (Cumulative or Individual Sequences)