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Nine Mile Point 1

RICT and 50.69 LARs

NRC Pre-Submittal Meeting

November 3, 2022

Introduction

- Agenda
  - Overview of License Amendments
  - Variances from TSTF-505-A Rev. 2
  - Timeline for Submittals
  - PRA Technical Adequacy
  - Evaluation Of PRA Uncertainties and Assumptions
  - External Hazards
  - Submittal Efficiencies

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Overview of License Amendments

- 50.69 LAR based on NEI 00-04
  - No deviation from LAR template (except seismic and extreme winds)
- RICT LAR based on TSTF-505-A Rev. 2
  - NMP1 is a BWR/2 reactor design
  - TS markups follow TSTF for BWR/4
- Variances from TSTF-505
  - NMP1 TS are NOT ITS (Custom TS)
  - Variances from TSTF-505 are mostly nomenclature, section numbering, and plant design
  - TSTF-505 LCOs/Conditions not in NMP1 TS
  - RICT added to plant-specific LCOs not in TSTF-505 (will be identified in Attachment 4)

Variances from TSTF-505

- NMP1 is a BWR/2 design. The TSTF-505 markups applicable to NMP1 are based on NUREG-1433
- Attachment 4 (Xref between TSTF ITS and NM1 TS) will highlight the following:
  - NUREG-1433 TS included in TSTF-505 and corresponding NMP1 have differing numbers
  - NUREG-1433 TS included in TSTF-505 that are not contained in the NMP1 TS
  - NMP1 TS included in TSTF-505 that are not contained in NUREG-1433. These TS perform functions similar to in-scope NUREG-1433 TS.
  - NMP1 TS that are not contained in NUREG-1433 and, therefore, are not included in the TSTF-505 mark-ups
- TSTF-505, Revision 2, includes an attachment for typed, camera-ready (revised) TS pages. NMP1 is not including such an attachment due to the large number of TS pages
- The STS terminology of Modes is not used in the NMP1 TS.

Variances from TSTF-505 (cont.)

- NMP1 Action descriptions generally correspond to NUREG-1433 Required Actions.
- NMP1 Actions that have different numbering than the NUREG-1433 Required Actions
- NMP1 takes a plant-specific variation to TSTF-505, TS 3.5.1.C, High Pressure Core Spray (HPCS) System Inoperable
- NMP1 takes a plant-specific variation to TSTF-505, TS 3.6.2.3, Residual Heat Removal (RHR) Suppression Pool Cooling
- NMP1 takes a plant-specific variation to TSTF-505, TS 3.6.2.4, Residual Heat Removal (RHR) Suppression Pool Spray
- NMP1 takes a plant-specific variation to TSTF-505, TS 3.7.1, Residual Heat Removal Service Water (RHRSW) System

Timeline for Submittal

NMP 1 – 50.69 and RICT LARs

- Two separate applications
- Both submittals on same day (or close to same day)
- Late November – early December 2022

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PRA Tech Adequacy

- FPIE PRA – Peer Reviewed to RG 1.200 Rev. 2
  - F&O Closure review performed
  - No Open Finding F&Os

- Fire PRA – Peer Reviewed to RG 1.200 Rev. 2
  - F&O Closure review performed
  - Four Open Finding F&Os

    (Already Addressed - Three Documentation-Related; One Technical-Related)

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Evaluation of PRA Uncertainties and Assumptions

- Both NMP1 submittals will follow the process defined in NUREG 1855 Rev. 1, and the guidance in EPRI 1016737 and EPRI 1026511, including:
  - Identification of Internal events/internal flooding PRA model plant-specific and generic sources of uncertainties per EPRI 1016737
  - Identification of Internal Fire PRA model plant-specific and generic sources of uncertainty per Appendix B of EPRI 1026511
  - Consideration of generic Level 2 model sources of uncertainty per Appendix E of EPRI 1026511, as applicable to LERF
  - Assessment of potential sources of uncertainties that are key to the respective applications, and disposition or treatment for the application
  - Consideration of Parameter and Completeness uncertainties

External Hazards Screening Process

- IPEEE Initial Screening
- Reviewed Current Hazard Information
- Updated Analysis Using Part 6 Screening Criteria of ASME/ANS PRA Standard RA-Sa-2009
- Performed conservative or bounding analyses where appropriate

- <u>RICT – Incorporates NEI 06-09 guidance.</u>
  - Justify exclusion of external risk sources from the PRA models based on their insignificance to the calculation of configuration risk

- <u>50.69 – Incorporates NEI 00-04 guidance</u>
  - Figure 5-6, “Other External Hazards”
  - Seismic will use EPRI alternative approach (TR 3002017583) for Tier 1 plants
  - Extreme winds will use a high winds safe shutdown equipment list

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External Hazards - Flooding

- Screens Out

- Event damage potential is less than events for which plant is designed (C1)

- Several doors are credited to screen out local intense precipitation (LIP) for 50.69
  - Normally installed and closed exterior doors keep water infiltration to a minimum and total ingress volume lower than required for impacting key SSCs during LIP event duration
  - These doors will be treated as HSS per NEI 00-04 Figure 5-6

External Hazards – Extreme Wind or Tornado / Missiles

- Will use High Winds Safe Shutdown Equipment List for 50.69
  * Still evaluating the potential to screen using PS3 Criterion

- Will Use Penalty Factor for TSTF-505

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External Hazards - Seismic

- Not Screened
  - Seismic hazard is relatively low (EPRI Tier 1 Plant)
  - RICT – Will Use Seismic Penalty Approach for RICT
  - 50.69 - Will submit as an EPRI Seismic Alternative Tier 1 Plant For 50.69
    - Tier 1 definition: (1) GMRS peak acceleration derived from the seismic hazard is at or below ≈ 0.2g or (2) where the GMRS is below or ≈ equal to the SSE between 1.0 Hz and 10 Hz.
    - NMP1 meets second criterion.

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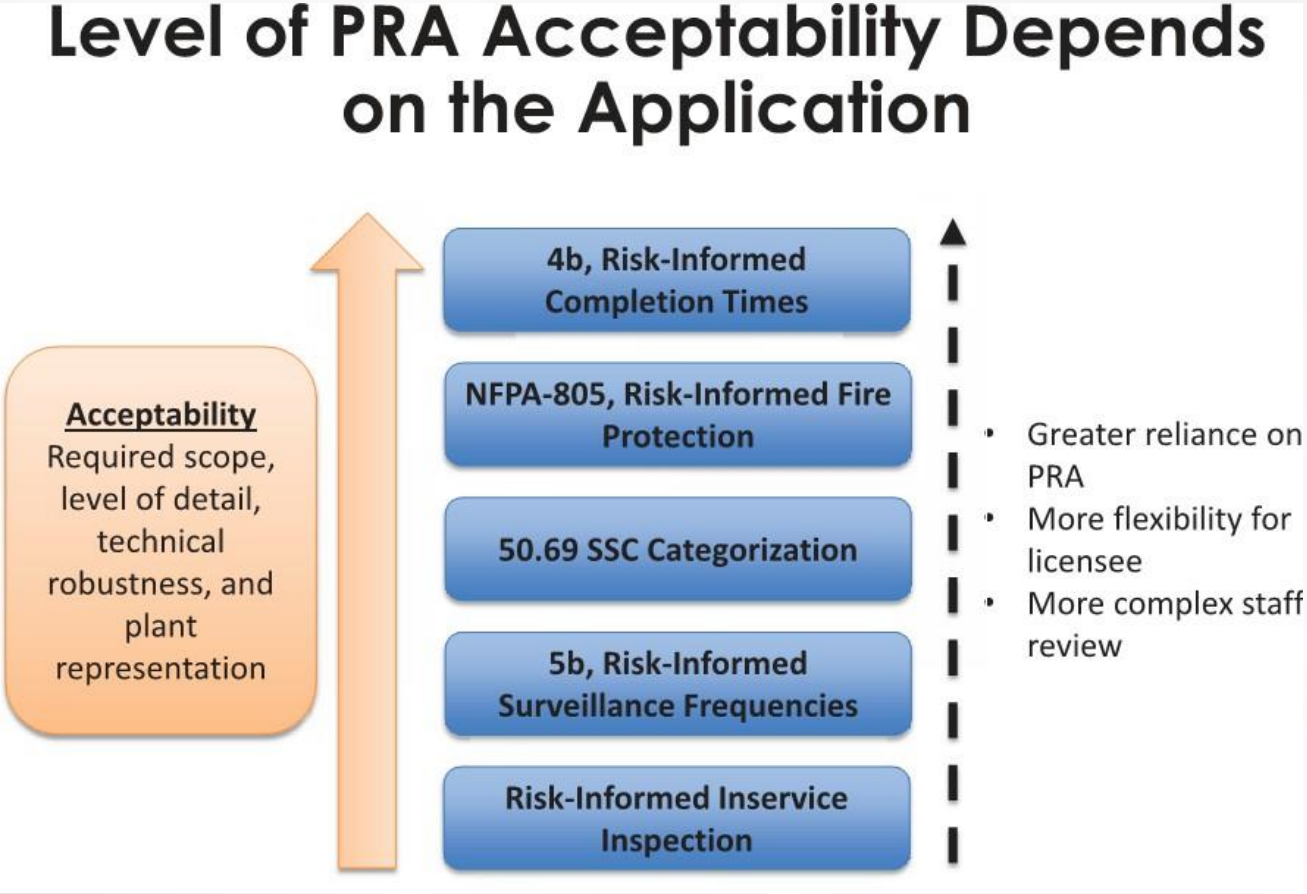
Submittal Efficiencies

- Overlaps in level of PRA acceptability in applications



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Submittal Efficiencies

- RICT - No deviation from Model SE
- 50.69 – No deviation from LAR template (except seismic and extreme winds)
- PRA
  - Common assessment approach of PRA technical adequacy and sources of uncertainty for both applications
  - Assessments are application-specific but related in terms of details to be considered
- External Hazards
  - Common screening approach of hazards
  - Application-specific assessment of screening impact but related in terms of details to be considered
- Same PRA teams reviewing PRA risk information

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Questions?