



Watts Bar Nuclear Plant, Unit 2 Safety Evaluation Report Review



Watts Bar Unit 2 Safety Evaluation Report Review for Operating License



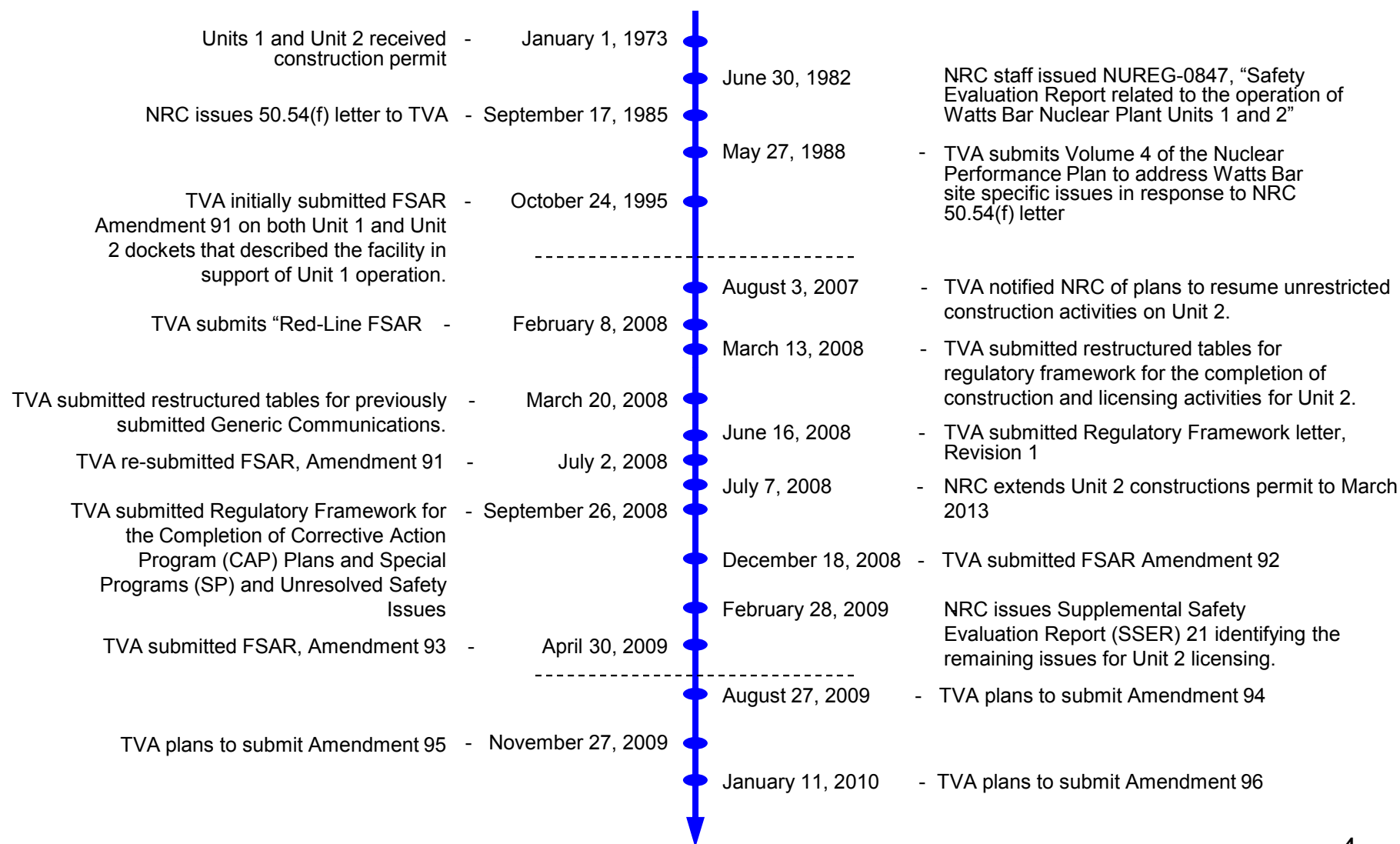
- TVA notified NRC of intent to complete WBN Unit 2 August 3, 2007
- TVA intends to align the licensing and design basis of WBN Units 1 and WBN Unit 2 to the fullest extent practical
- Commission SRM SECY-07-0096 endorsed a license review approach using the current licensing basis for WBN Unit 1 for the review and licensing of WBN Unit 2
 - Significant changes to licensing approach allowed where backfit rule would be met or as necessary to support dual unit operation

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- Technical Issues Resolved for Unit 2 as Part of WBN Unit 1 Operating License Review
 - Original Safety Evaluation Report NUREG-0847 – Watts Bar Units 1 and 2 (June 30, 1982)
 - Supplemental Safety Evaluation Reports (SSERs) 1-4 (1982-1985)
 - SSERs 5-20 (1990-1995)
- Generic Letters, Bulletins, Circulars and TMI Items Resolved for Unit 2 as Part of WBN Unit 1 Operating License Review
- Corrective Action Programs and Special Programs
 - Construction deficiencies unique to Watts Bar
 - Majority resolved for WBN Unit 2 using WBN Unit 1 Precedent
 - Change to WBN Unit 1 Precedent under Review
 - Programs Remaining Open
- SSER 21 – Baseline for WBN Unit 2 (February 2009)

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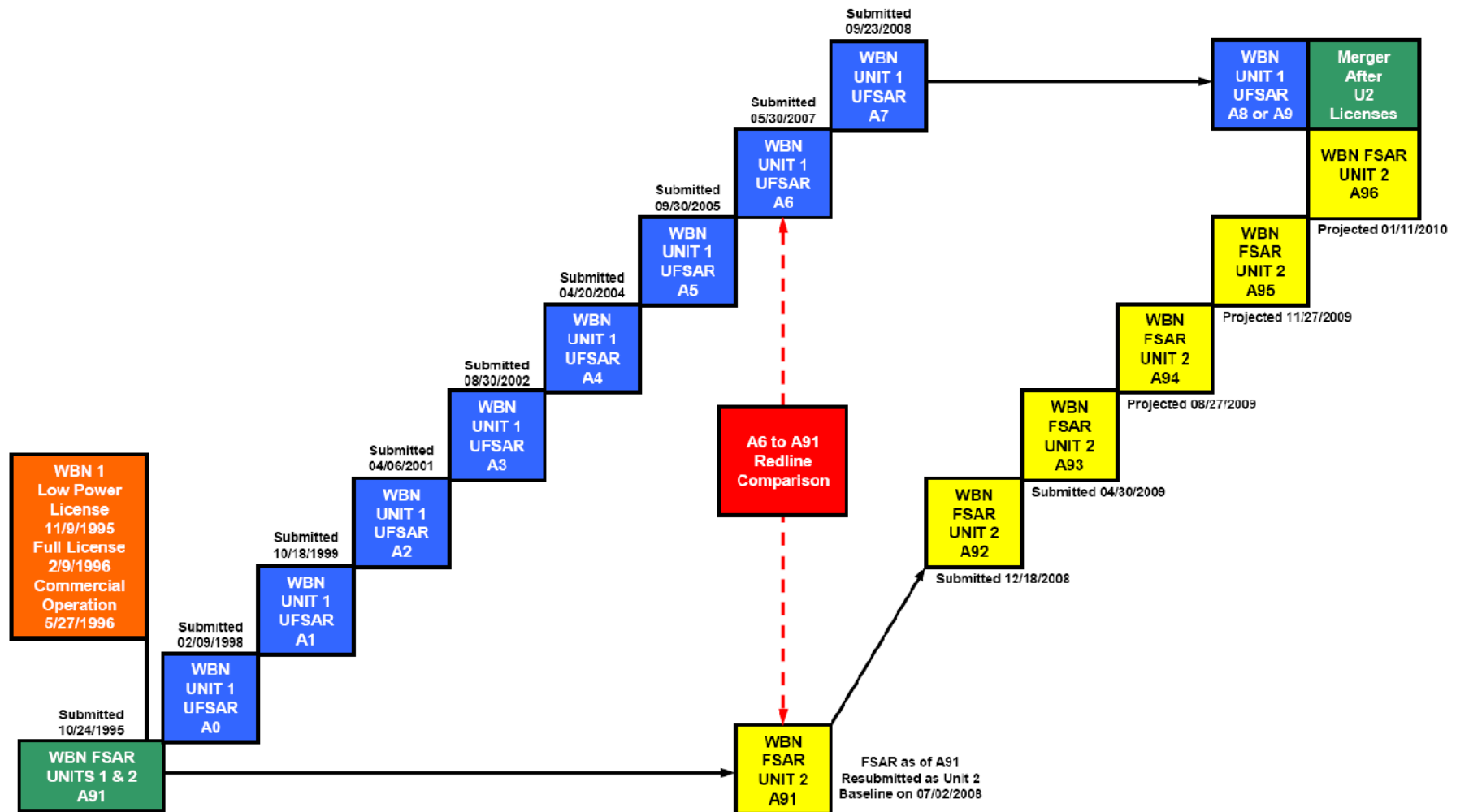
- Original SER addressed both Units when issued in June 30, 1982
- Supplements 1 through 4 also dealt with Units 1 & 2 (1982 – 1985)
- After Supplement 4 in March 1985, licensing activities for both units put on hold because of problems identified at TVA plants
- September 1985 50.54f letter
- NPP Volume 4 and NUREG 1234 Volume 4
- Supplements 5 (November 1990) through 20 (February 1996, with Unit 1 full-power license)
 - Focus primarily on licensing of Unit 1
 - Implementation of CAPs and SPs for Unit 1
 - However, some WBN Unit 2 issues were also addressed in these supplements as a result of the Unit 1 Licensing effort

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- TVA Activities to Aid Development of Supplemental Safety Evaluation Report (SSER) 21
 - Regulatory Framework Submittals
 - Documented results of TVA review of original SER and supplements to identify open issues
 - Red-Line FSAR
 - Electronic comparison of Unit 2 (1995) FSAR to current (2008) Unit 1 UFSAR
 - Generic Communications Submittals
 - Series of submittals in which a listing of generic communications focus on time periods of before and after Unit 1 Licensing
 - Before Unit 1 licensing in most cases, responses placed on both Unit 1 and Unit 2 dockets.
 - After Unit 1 Licensing, responses focused on strictly Unit 1 Operation.
 - Corrective Action Programs (CAPs) and Special Programs (SPs) Submittals
 - Committed Unit 2 to Unit 1 Precedent for most CAPs and SPs
 - Identified some CAPs and SPs where changes needed to be based on Unit 1 lessons learned. (e.g., Cable Issues)
 - Two CAPs and SPs closed based upon Unit 1 Licensing Effort

Watts Bar Unit 2 SAR History



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- NRC Activities in the Development of Supplemental Safety Evaluation Report (SSER) 21
 - Performed similar SER/SSER, Generic Communications, and CAPs/SPs reviews in parallel with TVA
 - Compared results of both NRC and TVA reviews
 - Conducted NRC/TVA meetings to resolve identified differences resulting from TVA and NRC reviews
 - Issued Request for Additional Information (RAI) on areas where additional information needed to be placed on the Unit 2 docket.
 - Issued SSER 21 on February 28, 2009.

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- Review Status for each SER Section in summary form can be found in SSER 21.
 - Document Status
 - Resolved
 - Open (NRR)
 - Open (Region II Inspection)
 - Provides reference to previous SER Review
- Further details can be found from the following sources:
 - NRC letter dated October 10, 2008 entitled, “Watts Bar Nuclear Plant, Unit 2 – Status of Regulatory Framework for the Completion of Operating License Review (TAC No. MD9424)”
 - TVA letters include
 - SER/SSER Items – Letter dated June 16, 2008 entitled, “Watts Bar Nuclear Plant, Unit 2 – Regulatory Framework for the Completion of Construction and Licensing for Unit 2 – Revision 1 (TAC NO. MD6311)”
 - Generic Communication Items – Letter dated March 20, 2008 entitled, “Watts Bar Nuclear Plant – Unit 2 – Generic Communications Status for Unit 2 – Restructured Tables”
 - CAPs/SPs Items – Letter dated September 26, 2008 entitled, “Watts Bar Nuclear Plant, Unit 2 – Regulatory Framework for the Completion of Construction and licensing Activities for Unit 2 – Corrective Action and Special Programs and Unresolved Safety Issues”

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- Of 356 SER Sections listed in SSER 21, Section 1.7, “Summary of Outstanding Items,”
 - 148 (41%) Items statused as “Resolved” - These sections have been reviewed and resolved with no further NRC review required, but may require a confirmatory review of the final FSAR section to verify no changes occurred from what was previously approved.
 - 125 (35%) Items statused as “Open (NRR)”
 - Some sections have outstanding issues (e.g. for dual unit operation, impact from generic communications, etc.)
 - Other sections will require TVA to provide further information (via additional correspondence or by FSAR amendments) to correct existing information that has changed since 1995.
 - Still other sections may require different approach that was used for Unit 1.
 - 17 (5%) Items statused as “Open (Inspection)”
 - NRR Review complete awaiting Region II Inspection results
 - 66 (19%) Items status field is blank - General Headings such as introduction, subject matter found under other headings, etc,

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- Of the 18 CAPs listed in SSER 21, Section 1.13.1, “Corrective Action Programs”
 - 14 (78%) Items statused as “Resolved” - These CAPs have been reviewed and resolved with no further NRC review required, but may require a confirmation of implementation by Region II Inspections.
 - 4 (22%) Items statused as “Open (NRR)”
 - Some CAPs have outstanding issues and will require TVA to provide further information
 - Other CAPs may require a review of a different approach based on Unit 1 lessons learned.
- Of the 11 SPs listed in SSER 1.13.2, “Special Programs”
 - 11 Items are statused as “Resolved” These SPs have been reviewed and resolved with no further NRC review required, but may require a confirmation of implementation by Region II Inspections.
- SBPB Portion of CAPs/SPs per LIC-110 are already resolved (MELB).

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- Of the 54 Open Generic Communications Items listed in SSER 21, Section 1.14, “Implementation of Applicable Bulletin and Generic Letter Requirements,” the NRC Action are listed as follows:
 - 39 (72%) Items statused as “Open (NRR)”
 - TVA has provided information as part of the Regulatory Framework for Unit 2.
 - 15 (28%) Items statused as “Submit Technical Specifications” – NRR review is to confirm existence of an TS addressing issue.

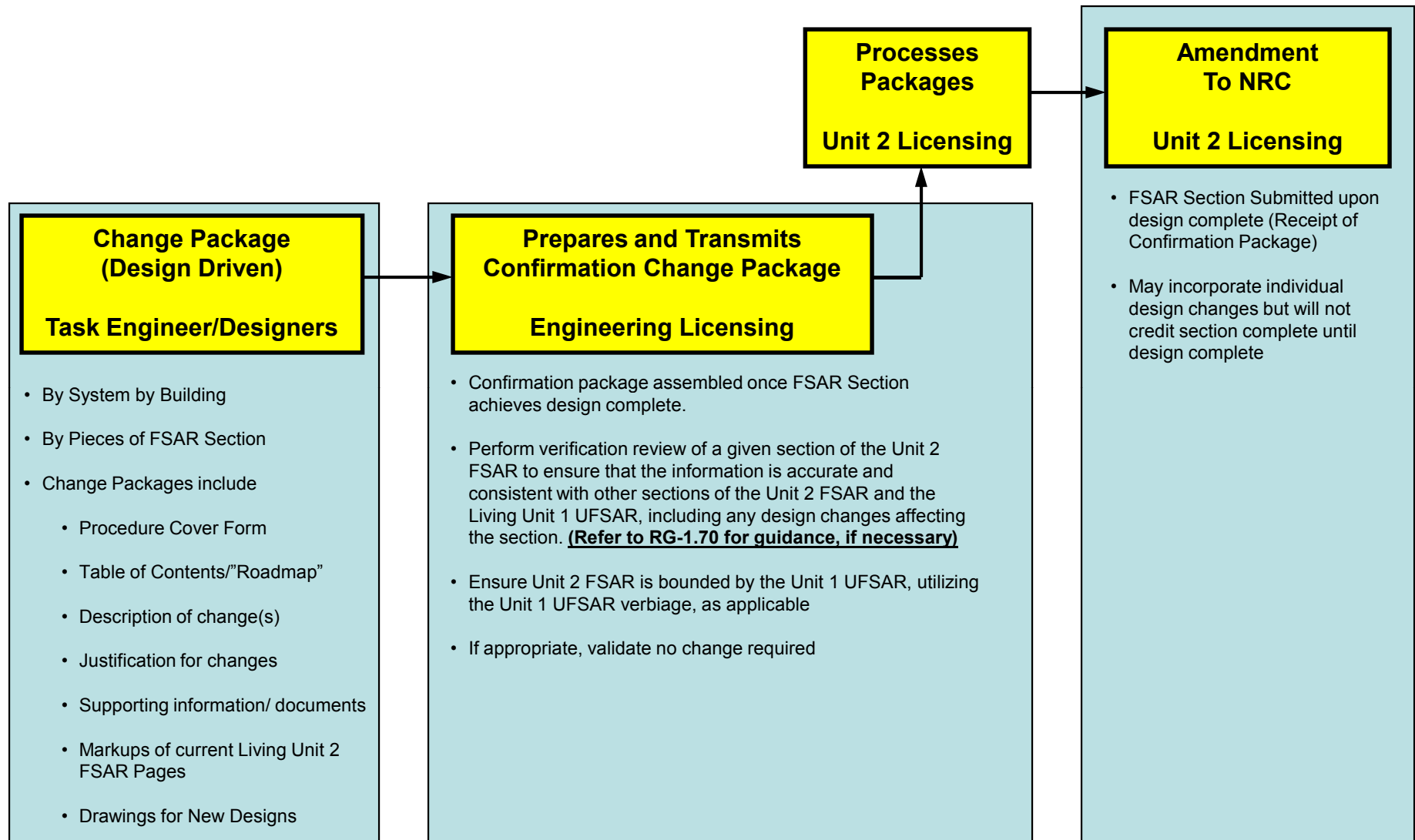
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- TVA systematic approach to resolve SER Issues will be via:
 - FSAR developed using RG-1.70
 - FSAR Amendments submitted as design completes by system by building in accordance with system waterfall schedule
 - Technical Specifications Updates to the templates provided as part of the Operating License Update submitted March 4, 2009
 - Additional Correspondence
 - Through meetings and/or teleconferences
- Status of outstanding issues will be tracked by periodically updates to TVA's Regulatory Framework Matrix and subsequent NRC SSERs.
- Preservation of Licensing Basis using PP-20, "Licensing Basis Preservation"

Watts Bar Unit 2

FSAR Simplified Process



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- In Summary
 - Approximately 65% SER sections are already resolved
 - Outstanding Issues are known and included in SSER 21.
 - TVA systematic approach will address and resolve the outstanding issues.
 - Limited FSAR changes
 - Submittal milestones remaining

Questions?