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Luminant/MHI Perspective on the Review for Risk-Informed Technical Specifications in US-APWR DCD and CPNPP COLA

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Objective

- ❑ **To demonstrate that NRC Review for RITS (Initiatives 4b and 5b) in US-APWR DCD and CPNPP COLA should be separated from the issue of Risk Metrics for New Light Water Reactors (LWRs)**
 - **Initiative 4b: Risk-Managed Technical Specifications (RMTS)**
 - This program allows Completion Time (CT) to be flexibly determined on site by a licensee using PRA result based on the real time plant configuration.
 - **Initiative 5b: Surveillance Frequency Control Program (SFCP)**
 - This program relocates Surveillance Frequencies (SF) to licensee control using PRA and operating experiences.
- ❑ **To verify acceptable status of RITS programs at COL issuance**
- ❑ **To propose the method to obtain NRC approval after COL issuance**



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Background

- ❑ NRC White Paper on Risk Metrics for New LWRs**
- ❑ Comanche Peak 3 and 4 (CP-3/4) COLA adopts RITS using risk criteria based on RG1.174 and 1.177**
- ❑ NRC mentioned that the review schedule might be affected by the issue of Risk Metrics for New LWRs.**



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Starting point

- NRC has promoted more use of Risk-Informed Regulations by new plants**
- NEI 06-09 (the guidelines for RMTS) states “The purpose of this report is to provide specific guidance on how to implement RMTS programs at existing and planned nuclear power stations”**
- NRC has approved the guidelines**



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Luminant/MHI position on “White Paper”

- Luminant/MHI support Option 1 in “White Paper” for risk metrics of new LWRs**
 - **Current risk criteria can be applied to new LWRs**
- US-APWR DCWG will support industries’ position in cooperation with NEI**



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Relation between DCD Review and Risk Metrics

- ❑ US-APWR TS in DCD provides the framework for RMTS and SFCP so that COL applicants can choose to adopt these RITS programs in their Plant-specific TS**
- ❑ The RITS programs will be completed by COL holders who choose to adopt them**
- ❑ The issue of risk metrics for new LWRs does not affect NRC review of US-APWR TS**



Relation between COLA Review and Risk Metrics

- If NRC decides to reconsider or revise the applicability of Regulatory guide 1.174 and the risk metrics contained therein to new reactors,**
 - It could affect the quantitative risk criteria contained in NEI 06-09 (RMTS) and NEI 04-10 (SFCP)**
- CP-3/4 TS states in the administrative controls section that it complies with the method and criteria specified in these guidelines**
 - The methodology of CP-3/4 RMTS/SFCP won't be affected**
 - The only change currently under consideration involves the criteria to be followed in the actual operation**



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Relation between COLA Review and Risk Metrics

- Key components of CP-3/4 COL RMTS/SFCP**
 - The appropriateness of their descriptions in TS**
 - Commitment to satisfy the requirements of the NEI guidelines (NEI 06-09/NEI 04-10) approved by NRC**
 - Implementation plan to satisfy these requirements**
 - Method adopted to demonstrate fulfillment of these requirements and to obtain NRC approval prior to initial fuel load, etc. (to be discussed later)**



Relation between COLA Review and Risk Metrics

- ❑ Sample calculations using current risk criteria and CP-3/4 PRA model may be of some help to understand the implications for its implementation at CP-3/4**
- ❑ However, it doesn't generate critical information for the safety evaluation of CP-3/4 TS. The method itself has already been approved by the NRC as the NEI guidelines**
- ❑ As a result, NRC review of CP-3/4 RITS should be separated from the issue of risk metrics for new LWRs**



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Status of RITS programs at COL issuance

- Technically adequate PRA (ASME Standard Category II) will be completed at least one year prior to fuel load**
 - to be discussed in detail in another presentation**
- Recently issued NRC Interim Staff Guidance* states:**
 - “The PTS (Plant-specific TS) issued with the COL will be complete and will contain no COL action (or information) items for the COL holder to resolve (i.e., completing the PTS). The COL will contain no license condition on completing the PTS.”**

*** DC/COL-ISG-08 “Final Interim Staff Guidance, Necessary Content of Plant-Specific Technical Specifications When a Combined License Is Issued” December 2008.**



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Status of RITS programs at COL issuance

- ❑ **NRC states in Regulatory Guide 1.206, “C.I.16 Technical Specifications” that:**
 - **“Manuals, reports, and program documents identified in the administrative controls section of the TS or applicable governing regulations are not considered to be part of the FSAR, TS, or TS bases.”**
 - **“Applicants may, but are not required to, submit such documents with the COL applications.”**
- ❑ **Therefore, CP-3/4 COLA approach with regard to RITS programs is consistent with RG1.206**



Method to obtain NRC approval after COL issuance

- The RITS programs for CP-3/4 TS must be reviewed and approved by NRC prior to initial fuel load**
- Luminant/MHI originally had intention to propose ITAAC**
 - Presented at DCWG meeting in July 2008**
 - NRC commented that ITAAC was not necessary and other approaches such as a license condition or a commitment would be appropriate**



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Method to obtain NRC approval after COL issuance

- Completion of RITS programs will be committed**
- This commitment will be stated explicitly in Part 10 of CP-3/4 COLA**
- Necessary contents to establish RITS programs specified in NEI 06-09/NEI 04-10 will be prepared and made available to NRC with sufficient lead time so that NRC can confirm compliance**
- Development schedule will be provided to NRC as necessary**



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Conclusions

- ❑ NRC review of CP-3/4 RITS should be separated from the issue of risk metrics for new LWRs**
- ❑ CP-3/4 COLA approach with regard to RITS programs is consistent with RG1.206**
- ❑ Completion of RITS programs will be committed in COLA**
- ❑ Necessary contents required by NEI guidelines will be prepared and made available to NRC with sufficient lead time so that NRC can confirm compliance**