
AREVA
forward-looking energy

CoC 1029 Amendment 4
NRC Pre-Application Meeting

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September 11, 2017

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Agenda

- Purpose
- Desired Outcome
- Amendment Background and Scope
- Schedule
- Discussion and Public Comments

Purpose and Desired Outcome

- **Purpose**
  - **Discuss TN's plans for CoC 1029 Amendment 4**
- **Desired Outcome**
  - **Have a clear, common understanding of the approach for Amendment 4, including scope and schedule**
  - **Receive feedback from the NRC staff**

Amendment Background and Scope

Need for Amendment

- Total clarity regarding TS and the Spent Fuel Pool
- Operational flexibility and consistency for certain HSM daily checks
- Consistency for HSM dose rate measurements, to better align with NEI 99-01 and support site emergency plan
- Elimination of cause of spurious alarms

Amendment Background and Scope

Scope

- No changes to DSC contents or design
- For future decommissioning needs, clarify the TS and UFSAR to remove any explicit requirements for a spent fuel pool after all spent fuel has been loaded into the AHSM or AHSM-HS at the ISFSI
- Credit the use of the installed temperature monitoring system in lieu of performing daily visual vent inspections for the 24PT1 DSC (as currently allowed for the 24PT4 and 32PTH2 DSCs)
- Provide TS AHSM dose rate limits for the 24PT1 and 24PT4 DSCs to provide peak dose rates on the front inlet bird screen and the door of the concrete storage module – similar to those currently provided for the AHSM-HS

Amendment Background and Scope (continued)

- **Update the limit for temperature increase associated with a blocked vent accident condition for 24PT4 based on Dual Thermocouple Locations.**

  - **Background (Technical Specification 5.2.5 (b))**
    - **TS Limits for Temperature Monitoring of AHSM with 24PT1 and 24PT4 are based on a single thermocouple location denoted as "Monitored Location"**
      - **Limits are 80 ^{o}F rise in 24 hours for 24PT1 and 30 ^{o}F rise in 12 hours for 24PT4**
    - **To ensure redundancy, a dual thermocouple option was implemented via a design change (72.48). Equivalent temperature rise at the dual thermocouple "Monitored Location" was determined using the same method of evaluation (MOE) as in the CoC 1029 UFSAR. The equivalent limits are:**
      - **8 ^{o}F rise in 24 hours for the 24PT1 and 5 ^{o}F rise in 12 hours for the 24PT4**
    - **This small temperature increase limit for 24PT4 results in spurious alarms necessitating visual inspections to ensure there is no blockage of the AHSM vents.**
    - **The thermal analysis of the AHSM in CoC 1029 Amendment 1 for the 24PT4 was performed using a combination of ANSYS FLUENT (Normal/Off-Normal) and HEATING7 (Blocked Vent Accident). This combination of software introduced additional conservatism.**

Amendment Background and Scope (continued)

- **Analysis - provide a new blocked vent accident analysis using ANSYS FLUENT.**
  - **This change in MOE necessitates NRC review.**
  - **Temperature rise limit for 12 hours and 25 hours re-evaluated based on new evaluation.**
  - **Preliminary results show a temperature rise of 9 ^{o}F at 12 hours and 24 ^{o}F at 25 hours after the start of the blocked vent accident condition.**
- **UFSAR will be updated to include the ANSYS FLUENT evaluation for temperature rise.**
- **To address the spurious alarms, the TS will be updated based on the 24PT4 dual thermocouple location results.**

Schedule

- **Application Submittal: November 30, 2017**
- **Requested Approval: Effective Date no later than March 31, 2019**

Discussion & Public Comments

- Open Discussion
- Comments
- Questions