HI-STORM FW Amendment 7 Pre-Application Meeting

April 20, 2021

Agenda

- Amendment 7 Proposed Changes
- Reorganization of the CoC with the Graded Approach
- Design Overview HI-STORM FW Version UVH
- Design Overview Optional Vent/Drain Port Cover
- Summary and Schedule

HI-STORM FW Amendment 7 Proposed Changes

- Reorganization of CoC with the "graded approach"
- HI-STORM FW Version UVH
  - Version UVH is a HI-STORM FW overpack with the removal of ventilation ducts.
- Optional vent/drain port cover plate design.
- Remove PT examination on the post hydrostatic pressure test.
  - PT not required as part of ASME hydrostatic pressure testing requirements
  - Supports ALARA operations
- Allow site-specific analysis of fire and burial under debris scenarios.
- Use of water without glycol in the HI-TRAC water jacket during operations below 32°F.
  - A minimum MPC heat load is demonstrated to prevent the water within the HI-TRAC water jacket from freezing.

HI-STORM FW Amendment 7 Proposed Changes

- HI-DRIP ancillary system.
  - An optional ancillary system designed to prevent water within the MPC during short term operations within the HI-TRAC.
  - Incorporation of design submitted with HI-STORM 100 Amendment 15 submittal.
- Addition of BWR fuel assembly class 10x10J
  - Fuel assembly class 10x10J is added to allowable content for storage in the MPC-89 canister.
  - Fuel type is currently in use by operating reactors and has been previously submitted for approval with the HI-STORM 100 LAR-15.
  - New fuel type was determined to be bounded by design basis fuel already analyzed in the HI-STORM FW FSAR.

CoC Reorganization Following the Graded Approach

- Background
  - RIRP-I-16-01 (2017): NEI proposed an outline for improving the storage CoC format and contents on behalf of the industry
  - TN Pilot (submitted 2017 – approved 2020): TN submitted a non-technical amendment to a CoC following the guidance in RIRP
  - NEI Margin White Paper: Recommendation VI-1: CoC holders should amend their CoCs to follow the precedent
  - Holtec CoC 1014 – Amendment 16 and planned CoC 1032 – Amendment 7 Requests include technical changes and a proposed reorganization of the CoC and its appendices

CoC Reorganization Following the Graded Approach

NEI Reorganized Outline:

- CoC
  - I. Technology
  - II. Design Features
- Appendix A – Inspections, Tests, and Evaluations
- Appendix B – Technical Specifications
  1. Definitions, Use, and Application
  2. Approved Contents
  3. LCOs and SRs
  4. Administrative Controls

CoC Reorganization Following the Graded Approach

- This LAR contains proposed technical changes to the existing CoC and its Appendices
- It also contains the following documents to support the reorganization:
  - Reorganized CoC and Appendices
  - Reorganization Tables
  - Reorganization Matrix

- The only items that do not fit into the proposed outline
  - Code alternative tables retained
  - Expanded information included in Appendix A

HI-STORM FW Version UVH

- Unventilated overpack with high density concrete. This overpack is analyzed and supports loading of MPC-37, MPC-89, and MPC-44.

- Removes periodic inspection of vent openings and associated LCOs.

- Similar to the approved HI-STORM FW overpack, the Version UVH is of the variable height design.

- Evaluation model methodologies are consistent with current HI-STORM FW analyses.

MPC Vent/Drain Port Cover Plates

- Optional vent and drain penetrations design to include second port cover plate.
- Design meets requirements of ISG-18 Rev. 1.
- Field helium leak test not required on optional design.
- Justification:
  - ALARA
  - Confinement Integrity

HI-STORM Amendment 7 Summary

- CoC Reorganized following the "graded approach".
- HI-STORM FW Version UVH is an unventilated version of the HI-STORM FW overpack with high density concrete.
- Evaluation methodologies follow those currently prior NRC approved models.
- Planned Submittal end of April 2021.

Questions and Discussion