



MAGNASTOR Amendment 9 Post-Submittal Meeting

NRC Docket No.: 72-1031

December 11, 2019

Agenda

- Open meeting topics
 - Primary scope of application
 - CoC enhancements and organization
 - Timeframe for approval
- Closed meeting topics
 - TMI implementation and concrete overpack design
 - Criticality analyses
 - Shielding analyses
 - Fuel loading patterns and analyses

Primary Scope of Application

- Supports the implementation of dry cask storage for Three Mile Island Unit 1
- Modifies fuel parameters for an existing B&W hybrid fuel assembly (i.e., increases the enrichment limit of BW15H2) and introduces one new hybrid assembly (i.e., BW15H5)
 - Four new zoned loading patterns have been developed to accommodate high heat load assemblies from the last core discharge
 - There are specific conditions for the transfer and loading of these assemblies (i.e., increased pool boron concentration and fuel basket absorber panel areal density)
 - Fuel transfer is limited to the use of MTC2 (i.e., the stainless steel transfer cask)
 - Fuel storage is in a more robust new overpack called CC6

CoC Enhancements and Organization

- The CoC and tech specs have become quite complicated and large over the past ten years of MAGNASTOR use
- The introduction of new loading patterns and other criteria to support this application made it clear the documents need to be simplified
- NAC has consolidated duplicative information in the tech specs and condensed as much information as possible with regards to figures and tables
 - Undamaged and damaged PWR fuel sections were consolidated
 - Loading patterns are now summarized in a single table referencing a single fuel basket figure
 - A new table has been created to make it easier for the user to find the applicable cool time tables, if applicable

Timeframe for Approval

- Exelon's Three Mile Island Unit 1 is planning to promptly move spent fuel from the pool to dry storage as soon as possible
- To support finalization of Exelon's loading campaign, NAC is requesting this amendment to be effective no later than March 2021 (i.e., 17 months after initial submittal)

Summary

- The major scope of this application is the new fuel loading patterns
- Other than the new more robust concrete overpack design, NAC is only making minimum hardware changes
- The more robust overpack design could have been implemented via 72.48 process. NAC elected to include it in the application to avoid having to update the FSAR prior to submittal, etc.
- The new overpack is substantially more robust than previous designs in order to support existing license requirements under Three Mile Island's Part 50 license
- An amendment effective date of March 2021 is required to support loading fuel beginning in Q3 2021 and NAC is committed to supporting an expediate NRC review and approval

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CLOSED PORTION

SLIDES WITHHELD PER 10 CFR 2.390