WCS CISF NRC RAI Part 1 Meeting

INTERIM STORAGE PARTNERS

Open Portion of the Meeting
Technical Discussion
January 10, 2019

Purpose and Agenda

- Discuss several first RAIs, Part 1
- Agenda

Open Meeting

1:00 p.m. – 1:10 p.m.	Introductions/Opening Remarks	NRC/ISP
1:10 p.m. – 3:15 p.m.	Discussion of NRC's November 16, 2018, non-proprietary request for additional information	NRC/ISP
3:15 p.m. – 3:30 p.m.	Opportunity for Public Questions and Comments for NRC staff	NRC/Public
3:30 p.m. – 3:40 p.m.	Adjourn/Transition to Closed Meeting	

Closed Meeting

3:40 p.m. – 3:45 p.m.	Introductions/Opening Remarks	NRC/ISP
3:45 p.m. – 4:00 p.m.	Discussion of NRC's November 16, 2018, proprietary request for additional information	NRC/ISP
4:00 p.m.	Adjourn	

RAI NP-2.4-3

- Provide clarification as to what is the exact design of WCS CISF rail side track, in particular the section east of the storage area.
- ISP Planned Approach:
  - Figures in Chapter 1 of the SAR are consistent with the flood plain analysis.
  - State that the design of the WCS CISF rail side track is consistent with the flood plain analysis and as shown in Figure 2-35 of the SAR.
  - The figures in Chapter 2 in question that show the rail in a slightly different position will be updated to indicate that the rail is shown for orientation purposes only and point to Figure 2-35.

RAI NP-15-1

- 1. Provide an applicable reference for minimal corrosion of the DSC shells during an 80-year exposure to a severe marine environment
  - ISP Planned Approach:
    - During the preparation of the CoC 1029 application TN Americas LLC was requested, by the lead utility, to prepare a calculation describing the expected life of the various NUHOMS® components proposed for use at San Onofre Nuclear Generating Station. This calculation prepared in 2002 shows a life expectancy of various stainless steels for the DSC shell is greater than 100 years for the worst case assumed marine environment (Kure Beach, NC data).
    - ISP will provide a copy of the calculation prepared in 2002 - "Suitability of Materials for a Dry Storage Facility for 100 Years Service in a Marine Atmosphere Environment"

RAI NP-15-1

- 2. Clarify the range of environmental conditions expected for the DSC internals
  - ISP Planned Approach
    - Revise statement as follows: "The DSC internals are enveloped in a dry, helium-inerted environment and are designed **to withstand the loads from** all **normal, off-normal and accident conditions.**"

RAI NP-15-1

- 3. Clarify the design life of 80 years for the HSM given reference UFSARs provide varying design lives.
  - ISP Planned Approach:
    - The differences in the reported life expectancy between the Rancho Seco Site license and the general licenses for CoC 1004 and CoC 1029 can be explained by the time frame in which each was written and the purpose for each.
    - "Suitability of Materials for a Dry Storage Facility for 100 Years Service in a Marine Atmosphere Environment" also provides evaluations for the materials used for HSMs.

RAIs NP-15-2, NP-15-3, NP-15-4, and NP-15-9

- Background
  - The CISF application includes Appendix H on the Canistered GTCC Waste to be stored.
  - It incorporates the systems that currently are part of approved UFSAR documents from the sites that store GTCC.
  - There are "pointers" in Appendix H to specific SARs that are incorporated in our application.
  - RAI NP-15-2 seems to go beyond information needed for the MP-187 system (and beyond the GTCC canister) since our application includes all information from the currently approved license at that facility.
  - RAI NP-15-4 and NP-15-9 seem to ask for information that is already included in the application.

RAI NP-15-4

- RAI NP-15-4 Maine Yankee (MY) Example
  - RAI NP-15-4 asks for the complete set of drawings for the GTCC canisters currently stored at…MY…and for the applicable codes and standards for the design and construction of these casks, noting that the drawings in Appendix H are only of the MPC, not the basket or the contents.
  - With respect to contents, Appendix H.3.1.1 specifically states that the GTCC waste is described in the NAC-UMS transportation cask SAR, Section 1.3.1.1.2, and lists the reference.
  - That reference details the contents (isotopes) and identifies the table that presents the source terms and the location of the drawings, the structural evaluation of the basket, its thermal evaluation, the containment and shielding evaluations. The waste does not contain any significant fissile material.

RAI NP-15-4

- RAI NP-15-4 Maine Yankee (MY) Example (Continued)
  - The waste basket is pointed out in SAR Section H.4.8 as Sheets 1 through 2 of Section 1.3.4 of the SAR for the UMS Universal Transport Cask. These drawings show the GTCC Waste Basket and identify the Codes.
  - The application addresses the identical question for MY, CY, Rowe, and Zion.

RAIs NP-15-2, NP-15-3, NP-15-4, and NP-15-9

- Factors
  - The RAIs state that information is needed to determine compliance with 72.24.
    - It is our understanding that ISG-17 defines what is required to comply with 72.24.
  - We have "incorporated by reference" the existing SF systems currently approved by NRC at Rancho Seco (includes GTCC), San Onofre, MY, CY, Rowe, and Zion, as well as the SF system at Lacrosse.
  - The canisters that will be stored are the ones that are currently in use at these locations.
  - RAI NP-15-2 requests information that is not included in the application as it was not included as part of the approval for the SMUD site specific license. Appendix H provides the same level of detail provided in Appendix C of the SMUD UFSAR for all GTCC canisters included in this application.

RAIs NP-15-2, NP-15-3, NP-15-4, and NP-15-9

- Conclusions
  - Information requested in RAIs 15-4 and 15-9 appears to be already provided.
  - RAI NP-15-2 appears to request information beyond what was required for the NRC to approve the DSCs, Transfer Cask (MP-187) and GTCC canisters in the SMUD site specific license.
  - For RAI NP-15-3, ISP has provided information related to the GTCC canister and contents to the same level of detail as that provided in the SMUD site specific license used by the NRC to approve the SMUD site specific license.
  - Much material that is presented already exceeds a strict conventional reading of ISG-17.

RAIs NP-15-2, NP-15-3, NP-15-4, and NP-15-9

- Summary
  - We want to be sure we understand these RAIs properly.
  - If information different from that provided is needed, we request that these RAIs be withdrawn or revised as needed.
  - RAIs seem to requests information beyond that which was required by the NRC in the past. As these canisters are already in use under existing dockets, adding "new" information impacts the "incorporation by reference" structure of our application.

RAI NP-15-13

- Incorporate the approved aging management programs for the NUHOMS®-61BT and NUHOMS®-61BTH Type 1 DSCs that are part of CoC No. 1004.
- ISP Planned Approach:
  - In accordance with the proposed license condition 20(1) "The Licensee shall commit to the AMPs committed to in the approved License Renewal of CoC 1004 for all NUHOMS® Spent Fuel Canisters and storage overpacks." Interim Storage Partners (ISP) has incorporated in each applicable Appendix (Appendix A – D) the applicable AMPs from the Renewed CoC 1004 for all NUHOMS® DSCs and HSMs.

RAI NP-15-13

- ISP Planned Approach Continued
  - Include discussion for why CoC No 1004 AMPs bound the NUHOMS®-MP187 Cask System
    - HSM Model 80 included in CoC No 1004
    - Reviewed and documented the evaluation of the subcomponents of the FO, FC, FF & GTCC DSCs and compare them to corresponding DSC subcomponents evaluated in the Renewed CoC 1004 and concluded that no aging management activity (AMA) is required, or that the AMPs in CoC 1004 are applicable.
  - Include discussion for why CoC No 1004 AMPS bound the Standardized Advanced NUHOMS® System
    - Reviewed and documented the evaluations of the subcomponents of the 24PT1 DSCs and AHSM and compared them to corresponding DSC and HSM subcomponents evaluated in the Renewed CoC 1004 and concluded that no aging management activity (AMA) is required, or that the AMPs in CoC 1004 are applicable
      - Note the HSM Model 152 (AHSM without ties) included in CoC No 1004

RAI NP-15-13

- ISP Planned Approach Continued
  - The following changes are made to the AMPs from CoC No. 1004 to reflect operation at the WCS CISF:
    - Rearranged program element requirements to align with NUREG-1927 Rev 1.
    - Did not include the high burnup (HBU) AMP – not authorized for NUHOMS® Systems
    - Did not include the Transfer Cask AMPs
      - Explanation/ Justification – The Part 71 transportation casks used to transport the DSCs from the originating ISFSIs to the WCS CISF will also be used to transfer the DSCs from the cask handling building to the HSMs. The inspections and maintenance performed on the transportation casks (i.e., to ensure the casks meet the Part 71 requirements) will be relied upon to ensure the casks are able to perform their intended functions as transfer casks. Therefore, no Part 72 Transfer Cask AMP is required.
    - Removed references to renewal and the CoC 1004 Amendments
    - Defined extended period of operation
    - Changed reference from Part 50 Appendix B program to TN Americas 10 CFR Part 72, Subpart G Program

RAI NP-15-13

- ISP Planned Approach Continued
  - The following changes are made to the AMPs from CoC No. 1004 to reflect operation at the WCS CISF:
    - Changed reference from general licensees to ISP
    - Removed reference to 72.212 report
    - Clarified that minimum DSCs for inspection are from each originating ISFSI
    - Removed grace period for first inspections
    - Removed reference to "Standardized NUMOMS® dry storage system"
    - Removed sentence for licensees not committed to ACI 349.3R
    - Various editorial changes
      - Various editorial changes were made to improve readability of the AMPs and to reflect that ISP is responsible for implementing the AMPs rather than a general licensee.

RAI EP-6

- Clarify the individual on site at all times with the authority and responsibility to accurately and timely perform emergency classification and notify offsite agencies and the NRC.
- ISP Planned Approach:
  - It is our understanding that there is no requirement that the person with the responsibility to accurately and timely perform emergency classification and notify offsite agencies and the NRC to be on site.
    - The IC or alternate is either on site or on call 24 hours a day and can perform his/her duties while off site.
    - The security officer stationed at the CAS has the responsibility to contact the IC immediately who then makes the required determinations and notifications.

RAI EP-20

- Justify the Alert criteria and dose thresholds used for the radiological plume incident in Appendix C.
- ISP Planned Approach:
  - The information included in Appendix C of the ISP Draft CERP is for the existing WCS Storage, Processing and Disposal Facility and does not apply to the WCS CISF.
  - The CERP will be updated to specify the facility (WCS CISF or WCS Storage, Processing and Disposal Facility) to which each section applies.
  - In addition, the information will be updated to the NRC-endorsed EAL guidance.

WCS CISF NRC RAI Part 1 Meeting

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RAI P-2.6-2

- Criteria for Backfill Compaction and Quality Control
- ISP Planned Approach:
  - Provide reference in the SAR to the backfill compaction and quality control requirements in Section 4.2.2 “Structural Soil Fill” of Attachment E to SAR Section 7.6.2.1.

RAI P-2.6-5

- Justify why the selected stratum depth of is adequate for evaluating settlement at the WCS CISF
- ISP Planned Approach:
  - The selected stratum depth is the shallowest auger refusal depth (obtained in boring B-101). Borehole auger refusal depths are from boreholes B-101, B-111, TF-1, and TF-4.
  - Seismic data (shear wave velocities) to 100 feet provide confirmation that significant settlement does not occur below auger refusal.

Thank-you for your time