

ENCLOSURE 1

Conversation Record: TN-32 Renewal Request for Additional Information (RAI)s 3, 5, & 6 held on January 13, 2021

RAI-3. Nuclear Regulatory Staff (NRC) staff sought clarification on the criteria used to determine whether an as found condition is considered an operational event or an aging effect.

Aging is the cumulative, time dependent degradation of a system, structure, or component (SSC) that, if unmitigated, could compromise continued safe operation. Aging effects are the results of natural, time dependent aging effects of an SSC.

NRC stated that animal burrowing into a berm appears to be better characterized as an aging mechanism given it is an expected natural process that does not involve human actions, an initiating event, or failure of another SSC.

TN Americas LLC (TN) stated it does not believe a burrowing animal is time dependent. Managing Aging Process in Storage (MAPS) does not list burrowing animals as an aging mechanism.

NRC stated that the key is that we have a potential event that could affect shielding. How does TN address that?

TN indicated that this is dealt with using the normal site monitoring practices and processes. Assessment of its significance addressed in the general licensee's (GL's) Correction Action program.

TN's above clarifications provided NRC with the understanding that potential burrowing animals in the berm would be addressed by the GLs using the GL's own monitoring program outside of the aging management program (AMP). Therefore, no supplemental information is needed for RAI-3.

RAI-5. NRC staff sought clarification on the following information regarding Radiation Monitoring for the TN-32 Cask AMP and requested that TN update the AMP as necessary.

1. How the parameters monitored or inspected will be capable of identifying degradation or potential degradation of the borated polyester and polypropylene neutron shielding material before a loss of intended function.
2. The technical basis to demonstrate that the method used for the detection of aging effects is capable of evaluating the condition of the borated polyester and polypropylene neutron shielding material with respect to the specific aging mechanisms identified in the renewal application.
3. How the acceptance criteria will ensure that the borated polyester and polypropylene neutron shielding material intended functions and the approved design bases will be maintained during the period of extended operation.

4. The technical basis to demonstrate that the operating experience supports a determination that the effects of aging will be adequately managed so that the borated polyester and polypropylene neutron shielding material intended functions will be maintained during the period of extended operation.

In responding to the clarification questions above, TN proposed to modify thermoluminescent dosimeters (TLDs), trend that data, and use that information to determine if there is degradation. If trends are showing increased degradation, then it is turned over to the Corrective Action Program.

NRC understands the Licensing basis to be on per cask basis and does not believe that this is currently addressed in the application.

TN stated the safety function is based on dose to the public. Monitoring at the fence provides assurances that safety function is maintained. Occupation exposures are covered by the Radiation Protection Program to ensure workers are protected. TN proposed to specify distances for TLDs around the fence to ensure adequate coverage.

NRC questioned TN as to whether distance between the TLDs is a legitimate assumption?

However, NRC understands what TN is proposing to provide as clarification to RAI-5. A separate follow-up clarification call for RAI-5 will be scheduled with TN after NRC has had chance to evaluate TN's proposed response identified above.

RAI-6. NRC staff sought clarification on the following information regarding the TN-32 inspection methods and inspector qualifications for the CoC 1021 Renewal Application Section 4.3.4, Detection of Aging Effects.

1. The general licensee's personnel training and qualifications requirements for conducting the annual inspection of accessible surfaces of all TN-32 casks.
 - TN proposes to add in the AMP.
2. The general licensee's personnel training and qualifications requirements for conducting the 20-year scheduled visual inspection of the lead TN-32 cask.
 - TN proposes to add in the AMP.
3. The inspection requirements for 20-year scheduled visual inspection of the lead TN-32 cask, including the components included in the inspection, the codes and standards used to conduct the inspection, and the acceptance criteria for the lead cask inspection.
 - TN to provide clarity as to where this is defined in the AMP or RAI response, or the information will be provided in the AMP as a supplement to the RAI response.