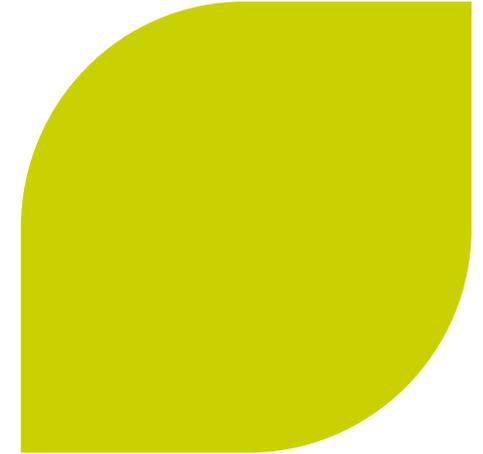


Public Version



Licensing Evaluation & Approach – 8/23/11 Seismic Event

Kevin C. Anstee, P.E.

July 2012

Transnuclear Inc.

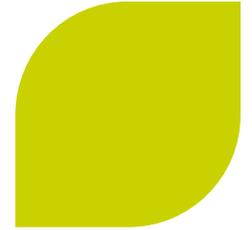


Licensing Approach



- ▶ Discuss proposed approach to permit the continued operation (loading & storage) of the NUHOMS[®] HD System ISFSI at North Anna following the 08/23/11 Seismic Event.
- ▶ Obtain NRC Feedback.

CoC and Technical Specifications



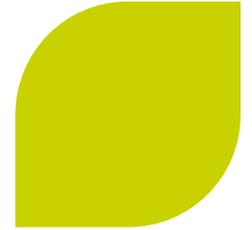
- ▶ **Condition 7 of the CoC 1030 for the NUHOMS® HD System**
 - ▶ **“Features or characteristics for the site, cask, or ancillary equipment must be in accordance with Appendix A (Technical Specifications).”**
- ▶ **Technical Specification 4.0: *DESIGN FEATURES***
 - ▶ **Section 4.6.3 Site Specific Parameters and Analyses,**
“The following parameters and analyses shall be verified by the system user for applicability at their specific site. ...
 8. Seismic loads of up to 0.30g horizontal and up to 0.20g vertical.”

CoC and Technical Specifications



- ▶ **Technical Specification 4.0: *DESIGN FEATURES***
 - ▶ **Section 4.2.2 Storage Pad states** “For sites for which soil-structure interaction is considered important, the licensee is to perform site-specific analysis considering the effects of soil-structure interaction. Amplified seismic spectra at the location of the HSM-H center of gravity (CG) is to be developed based on the SSI responses. ...”
- ▶ **Technical Specification 5.4: *HSM-H Dose Rate Evaluation Program***
 - ▶ **Item #3** “... the dose rate limits may not exceed the following values ...
 - ▶ a) 800 mrem/hr at the front bird screen,
 - ▶ b) 2 mrem/hr at the door centerline, and
 - ▶ c) 2 mrem/hr at the end shield wall exterior.”

HD System UFSAR



▶ UFSAR Section 2.2.3.1: *Input Criteria*

- ▶ “The seismic design criteria for the HSM-H is based on the NRC Regulatory Guide 1.60 (R.G.) [9]. The response spectra is anchored to a maximum ground acceleration of 0.30g for the horizontal components and 0.20g for the vertical component. ... Thus, based on the R.G. 1.60 response spectra amplifications, the corresponding seismic accelerations used for design of the HSM-H are 0.37g and 0.33g in the transverse and longitudinal directions respectively and 0.20g in the vertical direction. The corresponding accelerations applicable to the DSC are 0.41g and 0.36g in the transverse and longitudinal directions, respectively, and 0.20g in the vertical direction.”



Proprietary information withheld pursuant to 10 CFR 2.390





Proprietary information withheld pursuant to 10 CFR 2.390



Proprietary information withheld pursuant to 10 CFR 2.390



Proprietary information withheld pursuant to 10 CFR 2.390