

PMTurkeyCOLPEm Resource

From: Comar, Manny
Sent: Tuesday, March 13, 2012 4:41 PM
To: orthen, Richard; Raymond Burski; Steve Franzone; STEVEN.HAMRICK; TurkeyCOL Resource; William Maher
Cc: Comar, Manny
Subject: Draft RAI 6251 related to SRP Section 02. 03. 01 - Regional Climatology for the Turkey Point Units 6 and 7 combined license application.
Attachments: draft RAI 6251_TPN.doc

To All,

Attached is the draft of RAI No:6251, regarding section 02. 03.01 Regional Climatology for the Turkey Point Units 6 and 7 combined license application.

If you need a conference call to discuss the question(s) of the draft RAIs please contact me at 301-415-3863. Unless you request additional clarification we will normally issue the RAI as final within 3 to 5 days, from today.

Thanks

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Request for Additional Information No. 6251

Turkey Point Units 6 and 7
Florida P and L
Docket No. 52-040 and 52-041
SRP Section: 02.03.01 - Regional Climatology
Application Section: Regional Climatology

QUESTIONS from Hydrologic Engineering Branch (RHEB)

02.03.01-***

10 CFR 52.79(a)(1)(iii) states, in part, that the COL FSAR must include the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated. 10 CFR 100.20(c)(2) states that the meteorological characteristics of the site that are necessary for safety analysis or that may have an impact upon plant design must be identified and characterized and 10 CFR 100.21(d) states, in part, that the meteorological characteristics of the site must be evaluated and site parameters established such that potential threats from such physical characteristics will pose no undue risk to the type of facility proposed to be located at the site.

Nuclear power plants must be designed so that they remain in a safe condition under extreme meteorological events, including those that could result in the most extreme wind events (tornadoes and hurricanes) that could reasonably be predicted to occur at the site. Initially, the U.S. Atomic Energy Commission (predecessor to the NRC) considered tornadoes to be the bounding extreme wind events and issued RG 1.76, "Design-Basis Tornado for Nuclear Power Plants," in April 1974. The design-basis tornado wind speeds were chosen so that the probability that a tornado exceeding the design basis would occur was on the order of 10^{-7} per year per nuclear power plant. In March 2007, the NRC issued Revision 1 of RG 1.76, "Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants." Revision 1 of RG 1.76 relied on the Enhanced Fujita Scale, which was implemented by the National Weather Service in February 2007. The Enhanced Fujita Scale is a revised assessment relating tornado damage to wind speed, which resulted in a decrease in design-basis tornado wind speed criteria in Revision 1 of RG 1.76. Since design-basis tornado wind speeds were decreased as a result of the analysis performed to update RG 1.76, it was no longer clear that the revised tornado design basis wind speeds would bound design-basis hurricane wind speeds in all areas of the United States. This prompted an investigation into extreme wind gusts during hurricanes and their relation to design basis hurricane wind speeds, which resulted in issuing RG 1.221, "Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants," in October 2011.

The Turkey Point COLA incorporates by reference Revision 19 of the AP1000 Design Control Document (DCD). Section 3.5.4 of the DCD states, in part, that the COL applicant must show that missiles caused by external events separate from the tornado

have energies less than the tornado missile spectrum energies that the AP1000 is designed to withstand. Further, Section 3.5.4 of the DCD states that if missile energy is greater than the tornado missile spectrum energy evaluated in the DCD, the COL applicant must evaluate and show that it will not compromise the safety of AP1000 safety-related structures and components. In consideration of the guidance provided in RG 1.221, the applicant is requested to describe how the Turkey Point COLA satisfies the Combined License Information requirement of AP1000 DCD Section 3.5.4, or justify why this information is not needed. As appropriate, the applicant is also requested to provide proposed revisions to the Turkey Point FSAR that include the updated missile spectrum site characteristic values, or provide a justification as to why this is not necessary.