PMVogtleCOLPEm Resource

From: Christian Araguas
Sent: Wednesday, December 17, 2008 5:54 PM
To: wasparkm@southernco.com; Aughtman, Amy G.
Cc: PMVogtleCOLPEm Resource; Brian Hughes
Subject: Draft RAI 1854 Related SRP Section 3.8.4 for Vogtle Units 3 and 4
Attachments: RAI 1854 draft.pdf

To All,

Attached is Draft RAI 1854 related to SRP Section 3.8.4 for Vogtle Units 3 and 4. Please contact Brian Hughes tomorrow morning if you desire a phone conference regarding this RAI. Thank you.

Christian Araguas
Lead Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

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Request for Additional Information No. 1854 Revision 0

Vogtle
Southern Nuclear Operating Co.
Docket No. 52-0025 and 52-0026
SRP Section: 03.08.04 - Other Seismic Category 1 Structures
Application Section: FSAR Section 3.8.4

QUESTIONS from Structural Engineering Branch 1 (SEB1)

03.08.04-1

In the Vogtle early site permit application, ESP SSAR Section 2.3.1.3.4, Precipitation Extremes, states that the 48-hour probable maximum winter precipitation (PMWP) is about 147 lb/ft^2, and that the roof design of safety-related structures with respect to that design basis (147 lb/ft^2) would be described in the COL application. In the Vogtle COL application, FSAR Section 2.3.1.3.4 states that (1) the AP1000 DCD design basis snow load for the roof was 63 lb/ft^2, (2) the roof will not deflect enough to hold water under the snow load, and therefore ponding of rain water with pre-existing snow pack conditions will not occur, and (3) the physical arrangement of the AP1000 sloped roof is designed such that the 100-year snow pack will not prevent the PMWP water from draining off the sloped roof system.

In light of the 147 lb/ft^2 PMWP design basis described in the ESP application and the 63 lb/ft^2 design basis snow load for the AP1000 DCD referenced in the COL application, please provide the following: (1) Describe the required design basis in lb/ft^2 for the Vogtle roof; (2) Describe the magnitude of the maximum roof deflection under the roof design load for the 100-year snow pack and precipitation extremes identified at the Vogtle site, and demonstrate why this magnitude indicates that no roof ponding will occur under the Vogtle PMWP; and (3) Explain with specificity the application's conclusion that the roofs in the AP1000 DCD are designed such that all the Vogtle-specific winter PMP water will drain off from the roof.