

From: Michelle Hart
To: "David Fischer" <DCF@nrc.gov>
Date: 9/19/2007 9:58:07 AM
Subject: ACRS review of DSER dose consequences for Vogtle ESP
cc: "Charles Cox" <CXC5@nrc.gov>,"Jay Lee" <JYL1@nrc.gov>,"Cayetano Santos" <CXS3@nrc.gov>

Dave,

You had asked me if there is some information that the staff could give regarding the staff's evaluation of the radiological consequences of design basis accidents for the Vogtle ESP DSER for ACRS to better conduct their review.

The Vogtle ESP DSER discussion of the staff's review of the radiological consequences of DBAs is in Chapter 15.0.3. SNOC used only the approved version of the AP1000 DCD (Rev. 15) as the basis for the site safety analysis. SNOC evaluated the conformance with Part 100 and 50.34 siting dose acceptance criteria by determining the ratio of the Vogtle site-specific atmospheric dispersion factors to the reference atmospheric dispersion factors for the AP1000 design, then applying that ratio of atmospheric dispersion factors to the dose result in the AP1000 DCD for each accident evaluated and found acceptable for the AP1000. Since all the Vogtle site-specific atmospheric dispersion factors for each averaging period are less than the design reference values for the same time period, the accumulated dose during each time period, and consequently the total accumulated dose, would be less for the AP1000 plant on the Vogtle site than it was calculated to be in the AP1000 DCD. Since the AP1000 DCD showed that the dose consequence of each of the DBAs met the dose acceptance criteria and Part 100 and 50.34 limits, the AP1000 on the Vogtle site would also meet the appropriate regulations. This is the same procedure we have previously used for the ESPs for Grand Gulf, North Anna and Clinton. Vogtle is different than the previous reviews in that only one design (the approved version of the AP1000) is used as the reference plant for the Vogtle ESP.

We used the write up in the Grand Gulf ESP DSER to develop the Vogtle ESP DSER Chapter 15.0.3 discussion, so any clarifications that were found necessary in the Grand Gulf review should have been captured in the Vogtle text as well.

I hope this provides the requested information. If you have any questions, please let me know.

Michelle Hart

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