

## NRR-PMDAPEm Resource

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**From:** Regner, Lisa  
**Sent:** Wednesday, April 22, 2015 9:29 AM  
**To:** Wayne Harrison  
**Cc:** Sterling, Lance (lsterling@STPEGS.COM)  
**Subject:** New Subject for Bi-weekly call

Wayne,

Below is a topic for discussion this afternoon. I understand you may not be ready to respond due to the late addition, but the technical staff plans to discuss to ensure you understand what we're looking for. This is likely to become a new RAI question.

Thanks,  
Lisa

### **NRC follow-up question for teleconference discussion:**

#### **Section 2.2 of Enclosure 2-1 of the November 13, 2013 submittal provides STPs Evaluation of Impacts on 10 CFR 50.67 and GDC 19 which states:**

"The impact of the proposed exemption on the licensing basis analysis for demonstrating radiological consequences of the design basis LOCA meet the radiological dose guidelines specified in 10 CFR 50.67 and the dose limits specified in GDC 19 was evaluated. The risk-informed method provides confirmation of reliable ECCS and CSS performance as required for the licensing basis analyses that demonstrate the requirements of 10 CFR 50.67 and GDC 19. The method demonstrates that sump performance continues to support reliable plant design and operation and does not entail any exemption from 10 CFR 50.67 or GDC 19. For STP Units 1 and 2, which have implemented the Alternative Source Term (AST), the design-basis LOCA radiological consequence LOCA analysis is a deterministic evaluation based on the assumption of a major rupture of the reactor coolant system piping and the assumption of the deterministic failure of the ECCS to provide adequate core cooling (Reference 9). This scenario results in a significant amount of core damage as specified in RG 1.183 (Reference 10), and does not represent any specific accident sequence, but is representative of a class of severe damage incidents that were evaluated in the development of the RG 1.183 source term characteristics. Such a scenario would be expected to require multiple failures of systems and equipment and lies beyond the likely incidents evaluated for design-basis transient analyses (Reference 9). Since deterministic failure of ECCS is assumed at the onset of the accident by the analysis, the reliability of the containment emergency sumps with respect to ECCS operation does not affect the analysis for dose consequences. Therefore, for the purposes of this exemption request, the current licensing basis analyses for 10 CFR 50.67 and GDC 19 are not impacted."

**However, the STP provided response to Risk Informed GSI-191 AADB RAI 3 that shows that 50.67 and GDC 19 requirements (5 rem TEDE) could be exceeded in the control room and TSC because the containment spray system is not operating long enough to sufficiently decrease the dose.**

**Is the study calculation still relevant, since STP is not using the timing features of Casa Grande?**

**If this calculation is still relevant, confirm the low probability of strainer blockage and the low conditional core damage probability provides confidence of not exceeding 5 Rem in the control room and meets the acceptance criteria in Regulatory Guide 1.174 and continues to meet the criteria in Regulatory Guidance 1.183.**

**Staff would like to discuss these clarifications with STP as it relates to 10 CFR 50.67 and GDC 19 exemption.**

*Lisa Regner*  
Sr. PM  
NRR/DORL/LPL4-1

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