

**Attachment 1**  
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**Open item 3.4:** STPNOC needs to clarify how it addresses the significance of SSCs that function to protect the integrity of the containment for consequence mitigation in its categorization process.

**Response**

The STP PRA model describes containment response to a core damage event using four different containment response categories. One of the categories is Late Containment Failure, which makes up approximately 9% of all the containment responses to a core-damaging event. Late Containment Failure is defined as containment failure that occurs greater than 4 hours after vessel breach. Approximately 77% of all Late Containment Failures involve station blackout scenarios (i.e., no electric power). Loss of electric power presumes that no active SSCs (e.g., reactor containment fan coolers, containment spray, etc.) are available to mitigate the event. As a result, the reliability of active containment protection SSCs is not a significant factor in mitigating the risk of Late Containment Failures

In response to a previous Request for Additional Information (RAI #21), a sensitivity analysis was performed to evaluate the impact of increased equipment failure rates postulated to result from implementation of the requested exemption. For purposes of the sensitivity analysis for RAI #21, the failure rates were increased by a factor of 10 for categorized LSS components that are modeled in the PRA. The resulting changes to the Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) were found to be within the guidance provided by Regulatory Guide 1.174.

To address concern with Late Containment Failures, a sensitivity analysis was performed to demonstrate the impact to the Late Containment Failure Frequency. This study used the same postulated increase in component failure rates including common cause failure rates (i.e., a factor of 10) for all categorized LSS components and non-categorized low ranking components in the PRA. The following table presents the results of this analysis:

	<b>Current Average (events/reactor year)</b>	<b>Sensitivity Study <math>1_{LSS} * 10</math> (events/reactor year)</b>	<b>Increase</b>	<b>% Increase</b>
<b>CDF</b>	9.0781E-6	9.1590E-6	8.0900E-8	0.9%
<b>LERF</b>	1.3742E-7	1.3806E-7	6.400E-10	0.5%
<b>Late Cont. Failure</b>	8.2807E-7	8.5601E-7	2.794E-8	3.4%

Note, the results in the above table for CDF and LERF are different from the results presented in the response to RAI #21. This is largely due to a modeling update consistent with the “living” PRA policy at STP.

Regulatory Guide 1.174 does not provide guidance on acceptable increases in Late Containment Failure. However, a delta increase in the frequency of Late Containment Failure of 2.794E-8 is very small and comparable to delta increases in the CDF and LERF. The delta increases in CDF and LERF are small and consistent with the region III of Figures 3 and 4 in Regulatory Guide 1.174 and consistent with the intention of the Commission’s Safety Goal Policy Statement. Consequently, the potential increase in the frequency of Late Containment Failure, even assuming a factor of 10 increase in low ranking components, is considered acceptable.