

| Issue No. | Topic | Issue | Related Risk RAIs | Notes, Agreements, Commitments |
|---|------------------------|---|---|--------------------------------|
| F-C Curve Development - Frequency | | | | |
| LBE-07 | Frequency & Policy | The working group believes that whether LBE sequences below the lower frequency cutoff for the DBE region (i.e., 1E-5 per reactor-year) can be excluded from the accidents considered in developing the NGNP siting source term and assuring adequate DID of the NGNP functional containment system presents policy issues that the Commission would have to determine. | RAI LBE-39 | |
| LBE-08 | Frequency & Policy | Additionally, design basis events have been identified using deterministic engineering judgment for current reactors; establishment of a frequency cutoff criterion involves interpretation of regulations (e.g., 10 CFR 50.34(a)(1)(ii)(D) or 52.17(a)(1)(ix)) in a new manner, and, as such, presents policy issues that the Commission would have to determine. | RAI LBE-1 RAI LBE-5 RAI LBE-21 RAI LBE-29 | |
| LBE-10 | Frequency | It is the working group's view that DBEs involve event sequences or initiating events with mean frequencies less than 1E-2 per reactor-year and a mean frequency greater than 1E-5 per reactor-year. Additionally, it is the working group's view that BDBEs should involve event sequences or initiating events with mean frequencies less than 1E-5 per reactor-year and a mean frequency greater than 1E-7 per reactor-year. | RAI LBE-5 RAI LBE-21 RAI LBE-29 | |
| LBE-11 | Frequency & Policy | The frequency ranges as well as whether both event sequence frequency and initiating event frequency should be considered in the categorization of LBEs are considered Commission policy issues. | RAI LBE-5 RAI LBE-21 RAI LBE-29 | |
| LBE-16 | Frequency | Bounding events which would otherwise fall within the BDBE region should be evaluated [as design basis events] to ensure adequate defense-in-depth for containment of fission products, in accordance with regulatory requirements. | RAI LBE-28 | |
| LBE-22 | Frequency | The working group views the frequency ranges for categorizing LBEs as guidelines, and not sharp break points in categorizing events. That is, considering a BDBE which falls near the upper frequency boundary for such events could ensure such an event is addressed in an appropriately conservative manner. Any final staff decisions on the adequacy of LBE categorization would be made during the NGNP licensing review. | | |
| F-C Curve Development - Per Plant Year | | | | |
| LBE-09 | Plant-Year | As stated above, the NGNP Project proposes that the frequency of LBEs be expressed on a per plant-year basis where a plant is defined as a collection of reactor modules having selected shared systems and that the guidelines for the upper and lower frequency bounds for categorizing events be on a per plant-year basis. Therefore, for events involving a single reactor module, the frequency ranges per reactor module per year would be the proposed frequency ranges divided by the number of reactor modules that comprise the plant. For example, for such events, as stated above, for an eight reactor module plant design, the proposed lower frequency cutoff of 1E-4 per plant-year for DBEs impacting only one of an eight reactor module plant would result lower frequency cut off guideline of about 1E-5 per reactor-year. Thus, the cut-off frequencies on a reactor-year basis would vary depending | RAI LBE-5 RAI LBE-21 RAI LBE-29 | |
| LBE-18 | Frequency & Plant Year | As previously stated in the working group's assessment of LBE outcome objective 3, it is the working group's view that BDBEs should include event sequences or initiating events with mean frequencies down to 1E-7 per reactor-year. For a multi-modular plant with four reactor modules, this would be equivalent to event sequences or initiating events with mean frequencies greater than 4E-7 per plant-year. It is the working group's view that 1E-7 per reactor-year provides a reasonable cutoff for assessing whether the NGNP meets the NRC safety goals. | RAI LBE-37 | Related to LBE-09 and LBE-10. |
| F-C Curve Development - Uncertainty Treatment | | | | |
| LBE-15 | Uncertainty & Policy | However, this use of the F-C curve and whether associated calculations should be best estimate or conservative is considered to be a potential Commission policy issue, since it involves a new interpretation of the regulations and associated guidance for demonstrating compliance. | RAI LBE-6 RAI LBE-34 RAI LBE-36 | |
| Anticipated Operational Occurrences (AOO) Discussion | | | | |
| LBE-12 | AOOs | It is the working group's view that the dose calculation model for AOOs should include all the SSCs that have a role in the deterministic safety analysis of the event sequence, but that a conservative calculation of the mechanistic source term should be used to demonstrate that 10 CFR 20 dose limits are met. | | |
| LBE-14 | AOOs | Current regulatory practice uses conservative calculations to demonstrate conformance with AOO acceptance criteria. In addition, presently, AOOs are not expected to yield offsite dose consequences. The NGNP Project proposes a best estimate calculation with some level of potential offsite consequences. The working group believes that, while use of 10 CFR 20 to establish AOO acceptance criteria is appropriate, calculations demonstrating compliance with those criteria should be done conservatively for events which, by definition, are considered likely to occur within the lifetime of the facility. | RAI LBE-6 RAI LBE-12 RAI LBE-15 RAI LBE-32 | |