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General Comment

The change from LOCA to MHA LOCA does not acknowledge progress made beginning with the original Perry amendment for 10 CFR 50.67. The DPO 2020-002 idea that the current RG 1.183, Rev. 0 methods leads to an inappropriate need to impose non-physical assumptions and ignores the physical processes that would lead to such a condition. Therefore, it too, also creates the need to impose non-physical assumptions. Lines must break for the radioactivity to get to the containment and melt the fuel. Now these facts are being ignored with something that is from the early ages of nuclear when we didn't have codes like MELCOR to model the physical phenomena involved. It also ignores the fact that the steamline is connected to the reactor and the source term aerosol sizes will be smaller than those outside the reactor vessel. Given the distribution in the reactor coolant system is 1 to 2 microns AMMD, using a 2-micron value will lead to non-conservative doses. Keep the methods as they exist in all the license amendments cited in Appendix A of DPO-2020-002 where the cessation of the core melt accident is consistent with the reflood necessary to stop the accident. Given the uncertainty of the accident progression and the location of the reactor vessel as being the closest to the MSIVs, change the aerosol source size distribution to a value that is appropriate for the aerosol distribution coming from the core (1 AMMD) rather than using the value at the top end of the distribution for reactor coolant source term aerosols.

We believe that the regulatory position that does not credit deposition up to the main steam lines is appropriate. These volumes are part of the source term volumes. An assumption of instantaneous and homogeneous mixing in these volumes would conflict with the assumption used in the deposition models that only consider gravity and buoyancy are acting on the radioactive particles in these volumes.