

Definitions – Coated Fuel Particle Conditions

- Intact – TRISO coatings are structurally intact
 - Release of some metallic fission products (e.g., silver) can occur
 - Release depends on temperature and time at temperature
- Functionally Degraded or Failed – Coatings (particularly SiC) degraded such that additional metallic fission products (e.g., cesium) are released
 - Fission gases, including iodines, still retained by intact PyC coatings
 - Release depends on temperature and time at temperature
- Failed – Open pathway from the kernel to the outer surface of the particle
 - Kernel has significant fission product retention capability - especially for short-lived fission gases, including iodines.
 - Release depends on temperature and time at temperature
- Mechanistic Source Term evaluations take into account all of these fuel particle conditions, as well as core temperature distribution and time at temperature