

Mechanistic Source Term Development



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Background

- NRC Advanced Reactor Policy Statement (SECY-08-0130)
- NRC SMR Policy Issues Document (SECY-10-0034)
- Design Characteristics
 - Small source term
 - Additional fission product barriers
 - Current analyses indicate design basis accidents do not result in core damage and subsequent release
 - Current AST basis does not apply
 - No LBLOCA
 - No LERF

Issues

- Basis of AST was developed for large LWRs and does not apply to NuScale design

Pre- Application Outcomes

- Feedback on approach for calculating design basis source term and release

Pre-Application Engagement

- Pre-application workshop to present
 - approach to mechanistic source term and consequence analysis for design basis accidents
 - consequence analysis for severe accidents
- White Paper on Mechanistic Source Term describing calculation of source term and releases for design basis accidents