



FRAMATOME ANP



Replacement BAW-2374

Dose Evaluation – Source Term

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Replacement BAW-2374

- > Position Paper concluded MHA source term not credible for U-Bend Hot Leg Break LOCA***

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- ◆ *10CFR100 Requirements*
- ◆ *Current Licensing Bases*
- ◆ *Cladding Rupture Analysis*

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- > **10CFR100 Language**
- > ***“1 The fission product release assumed for these calculations should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events, which would result in potential hazards not exceeded by those from any accident considered credible. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release of appreciable quantities of fission products.”***

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- > **Current Licensing Bases**
- > **LBLOCA – Gap activity only**
- > **SGTR – 1% Failed Fuel**
- > **Control Rod Ejection – Portion of cladding breached**
- > **MHA – TID Source Term** – 1% fuel ^{melt} ~~fail~~ + gap activity

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- > *Clad Rupture Study***
- > *Nominal to Conservative Input***
- > *Results***
 - ◆ *No clad failure predicted***
 - ◆ *99°F margin to clad rupture for LL***
 - ◆ *72°F margin to clad rupture for RL***

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> Conclusion

> Position Paper –

- ◆ Credible source term is RCS TS activity limit**
- ◆ MHA source term not credible for U-Bend Hot Leg Break LOCA**