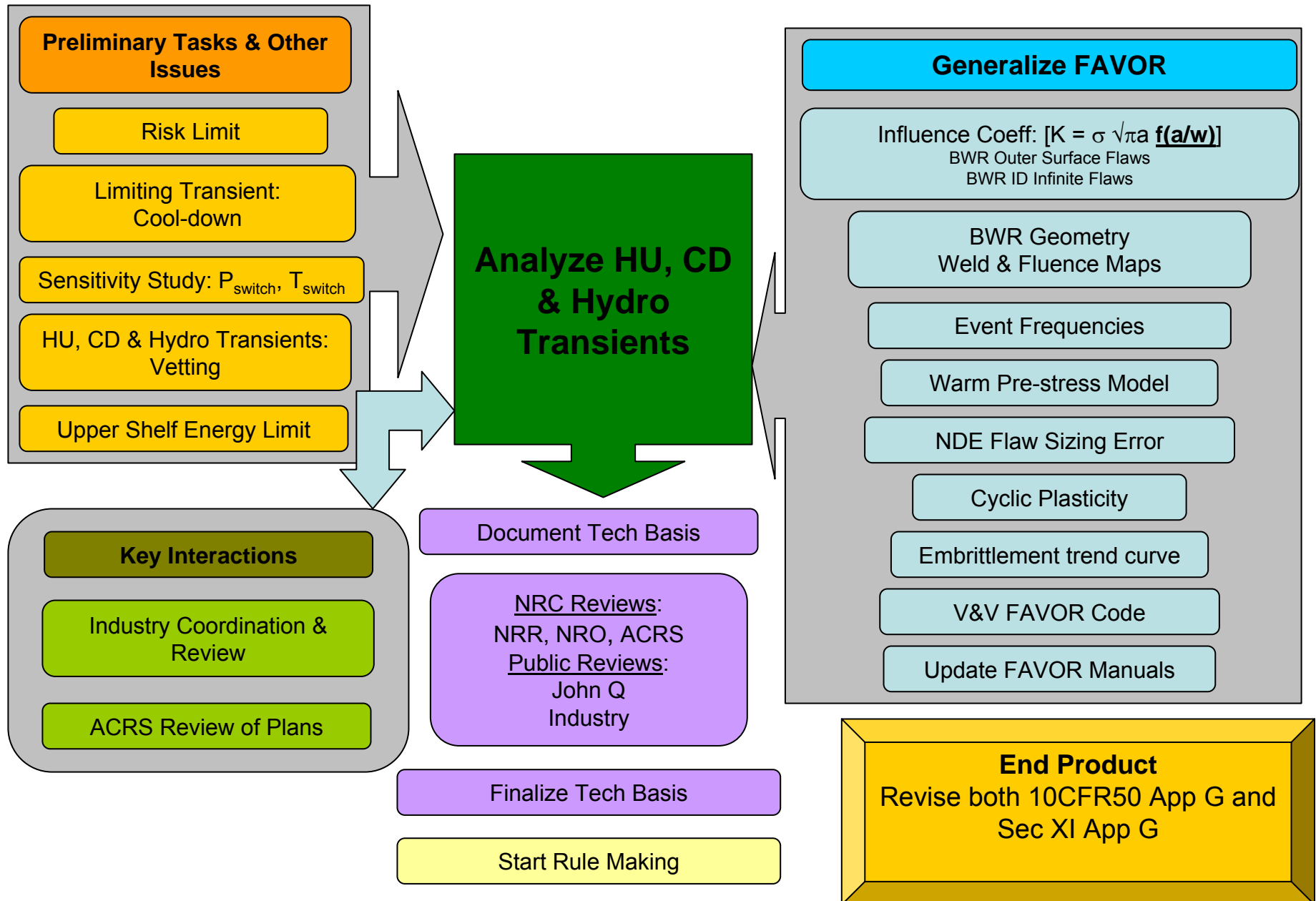
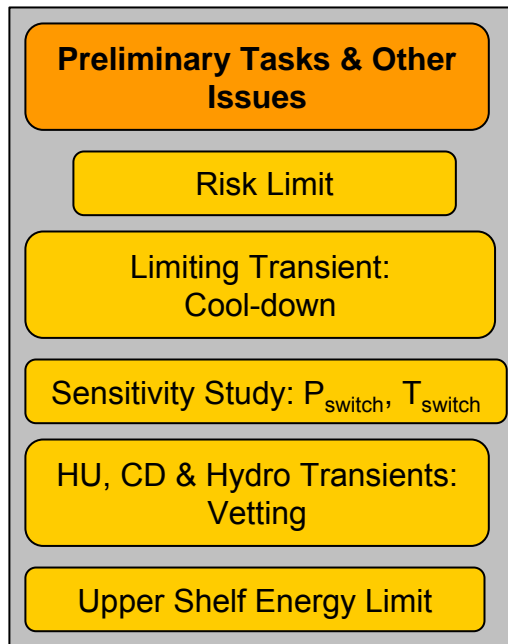


# Risk Informing ASME Section XI Appendix G: Tasks

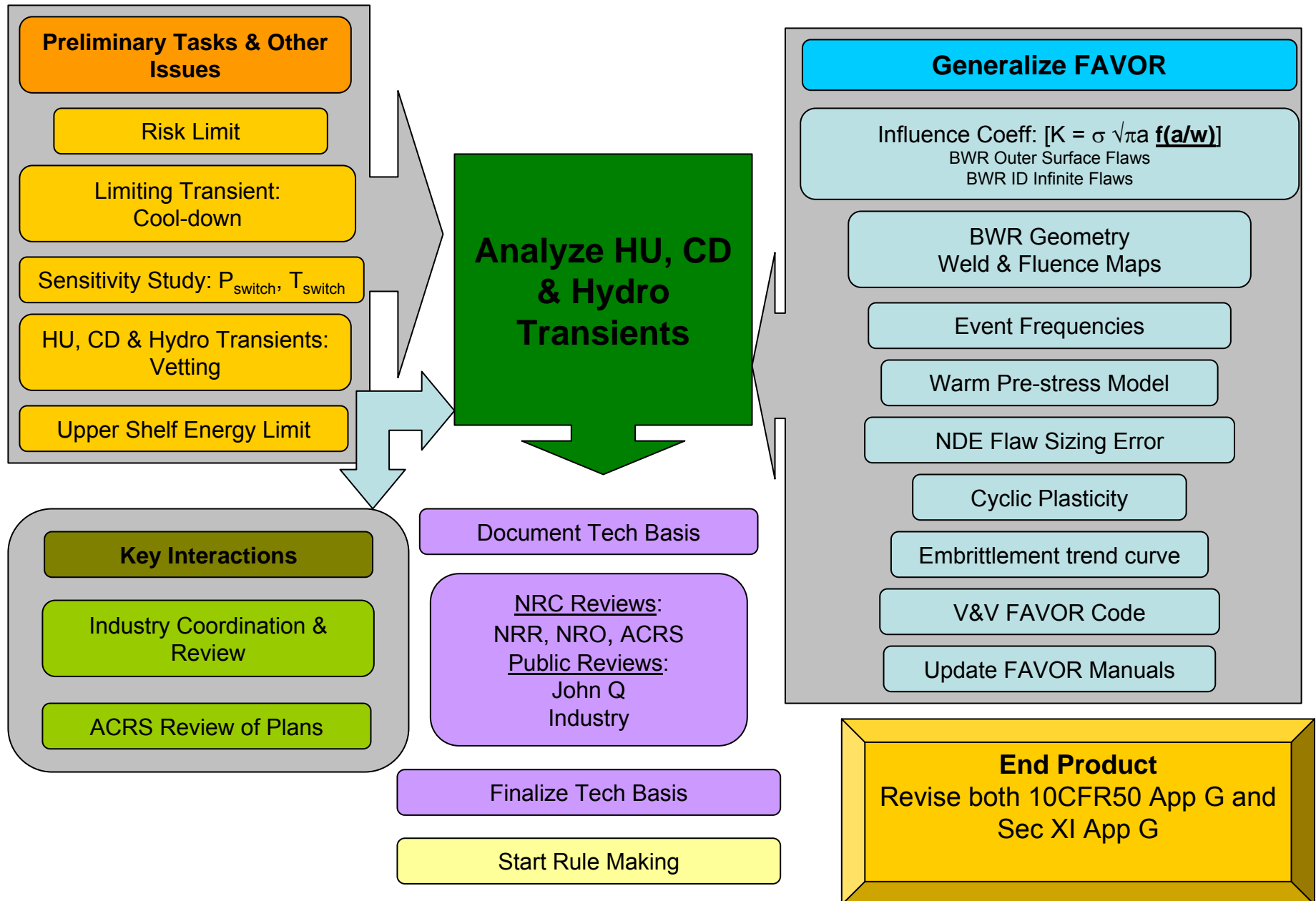


# Preliminary Tasks and Other Issues



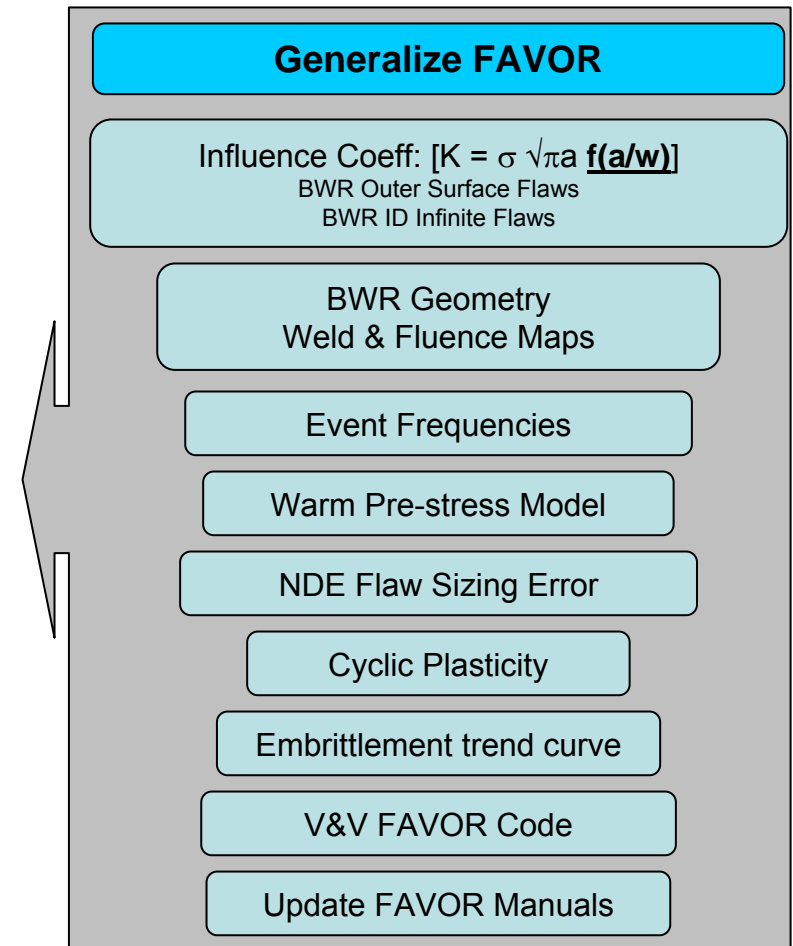
- **Risk Limit:** Establish definition of vessel “failure” and numeric acceptance criteria
  - CPI, CPF, TWCIF, TWCF, ...???
- **Limiting Transient:** Cool-down appears to be significantly more limiting than heat-up
- **Sensitivity Studies:** PWR CD parameters
- **HU, CD & Hydro Transients:** Seeking concurrence on proposed transients
- **Upper Shelf Energy Limit:** Considering revising

# Risk Informing ASME Section XI Appendix G: Tasks

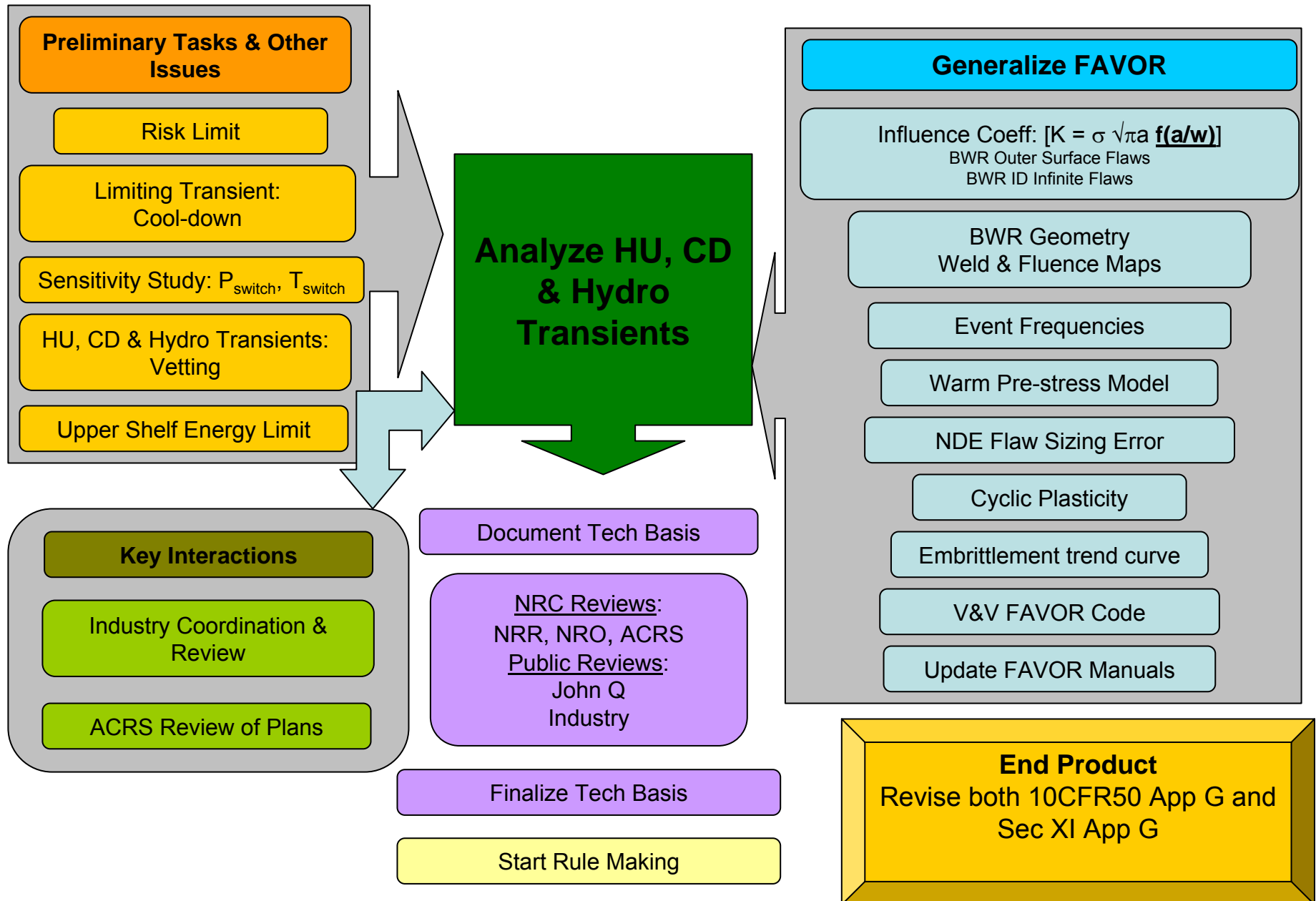


# Generalizing FAVOR

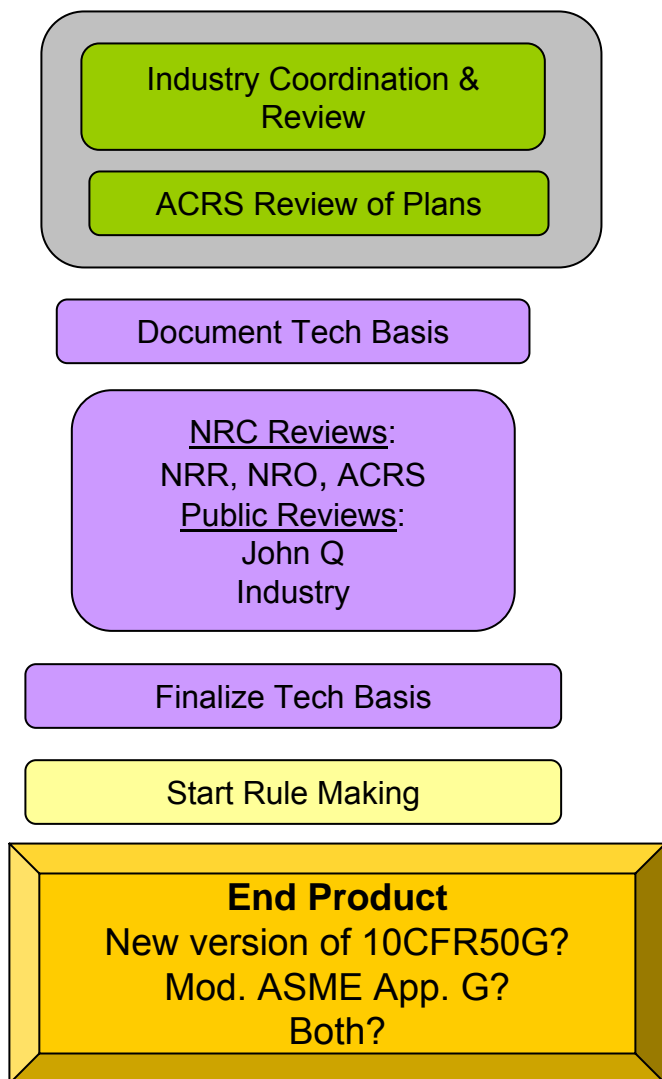
- **Influence coefficients:**
  - Inner surface breaking: RPVs with  $R_i/t$  between 10-20.
  - Outer surface breaking: RPVs with  $R_i/t = 20$
- **BWR Weld & Fluence Maps:** RPV plate/weld roll out diagram and fluence map for a specific vessel.
- **Warm Pre-stress Model:** Re-visiting existing model (not on critical path).
- **NDE Flaw Sizing Error:** Develop and incorporate POD and sizing error model into FAVOR (on critical path? TBD)
- **Cyclic Plasticity:** Incorporate cumulative effects of multiple HU/CD transients into FAVOR.
- **Embrittlement Trend Curve:** Incorporate latest trend curve – try to account for high fluence. (not on critical path)



# Risk Informing ASME Section XI Appendix G: Tasks



# Tech Basis Review



- Industry Coordination and Review: Regular meetings (TBD) and interactions
  - Aug 21
- Draft Tech Basis Doc
  - Internal reviews
  - Public comment
- Final Tech Basis
- Rule Making
  - End Product:
    - Revise Sec XI App. G to remove excessive conservatism
      - Based on PFM
      - How it is revised is TBD (multiple options)
    - Revise 10CFR50 App. G
      - Reference Sec XI App. G to the greatest extent possible

# BWR Analysis

- $R_i/t$  for BWR > PWR
  - Influence coefficients
- BWR selected to model with FAVOR
  - Representative of high  $RT_{NDT}$  @ 60 years
  - Axial Weld
  - vessel “rollout” diagram and fluence map
- Transients
  - HU and CD follow saturation curve
    - Prefer profiles ( $dT/dt$ ,  $dP/dt$ ) related to operational conditions
  - Hydrostatic tests

