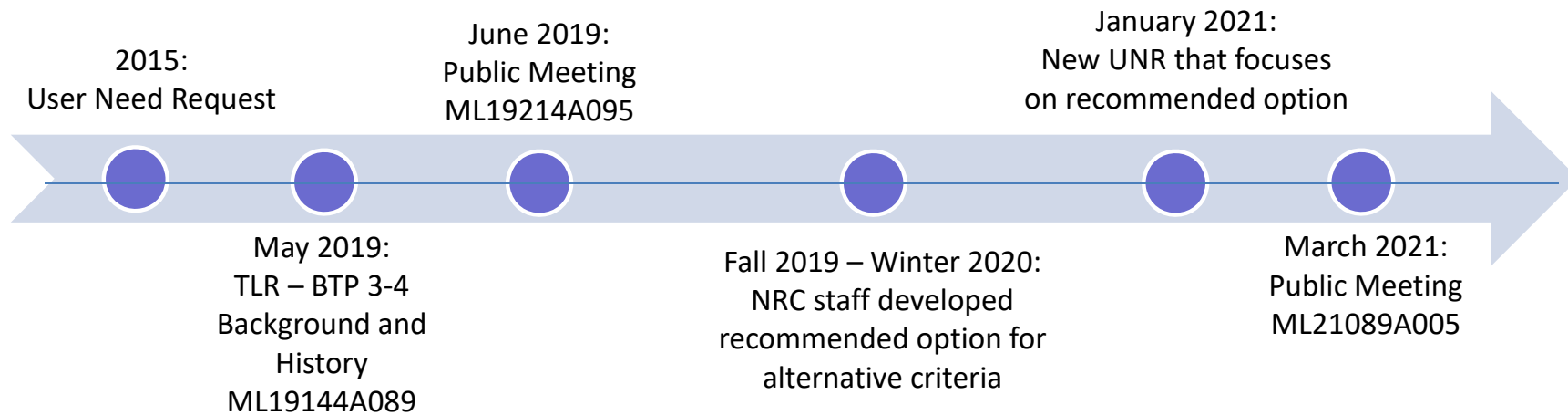




Materials Programs Technical Information
Exchange Public Meeting
Update on High-Energy Line Break Activities

Nuclear Regulatory Commission
August 11, 2021
Virtual Meeting

Overview and Timeline



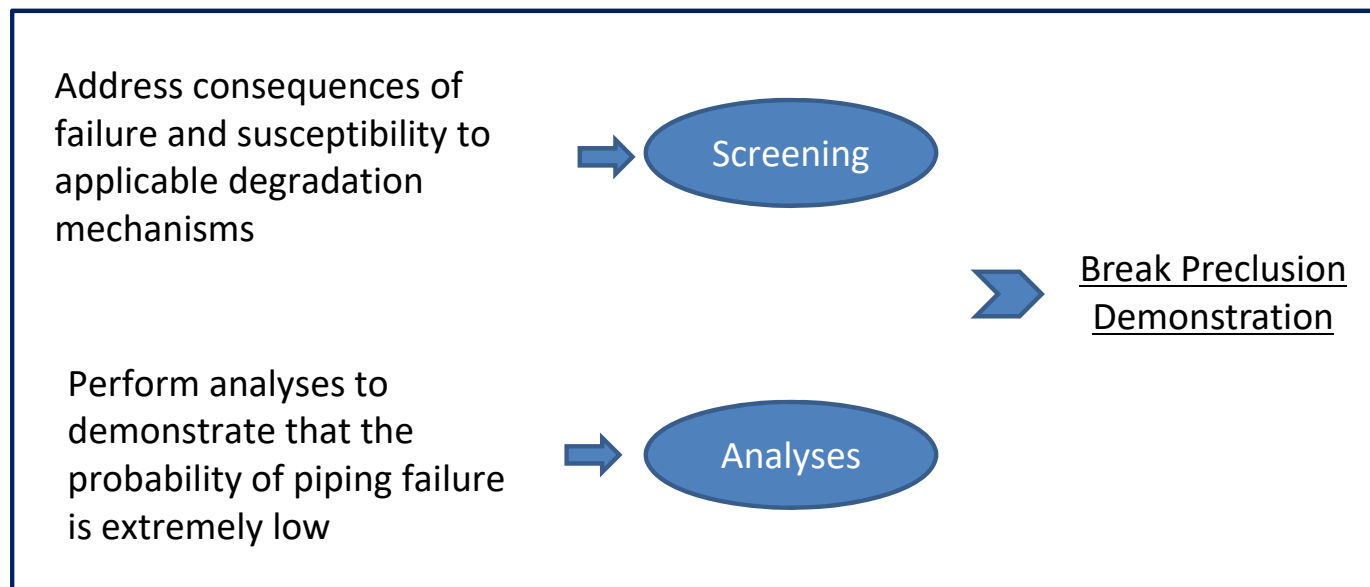
Steady Progress

Revising BTP 3-4: Underlying Philosophy

- Significantly revamp existing BTP
 - Eliminate stress reduction criteria, relax CUF criterion
 - Consider other degradation mechanisms
 - Tailor fatigue evaluations, as needed, to applicable systems/components
- Support operating reactor, new reactor, and advanced reactor applications
 - Provide identical framework and approach
 - Require unique evaluations or analysis depending on reactor type
- Approach should be risk-informed
 - Consider both susceptibility to degradation and failure consequences
 - Utilize a graded approach consistent with the risk
- Broaden scope beyond classical, LWR welded-piping systems
 - Include other types of connections (e.g., bolted)
 - Include other appropriate passive components/systems
- The approach will be similarly applicable for high and moderate-energy level breaks



Guidance Approach: Similar Philosophy to SRP 3.6.3 – Leak-Before-Break (LBB)



Increasing Risk



Increasing Rigor

Current Status and Path Forward



- NRC staff is developing the framework and associated technical basis
- Future deliverables:
 - TLR on the technical basis for the alternative framework (mid 2022)
 - TLR that documents the alternative framework and associated technical basis (late 2022)
 - NUREG documenting the technical basis for the alternative framework (2023)

