



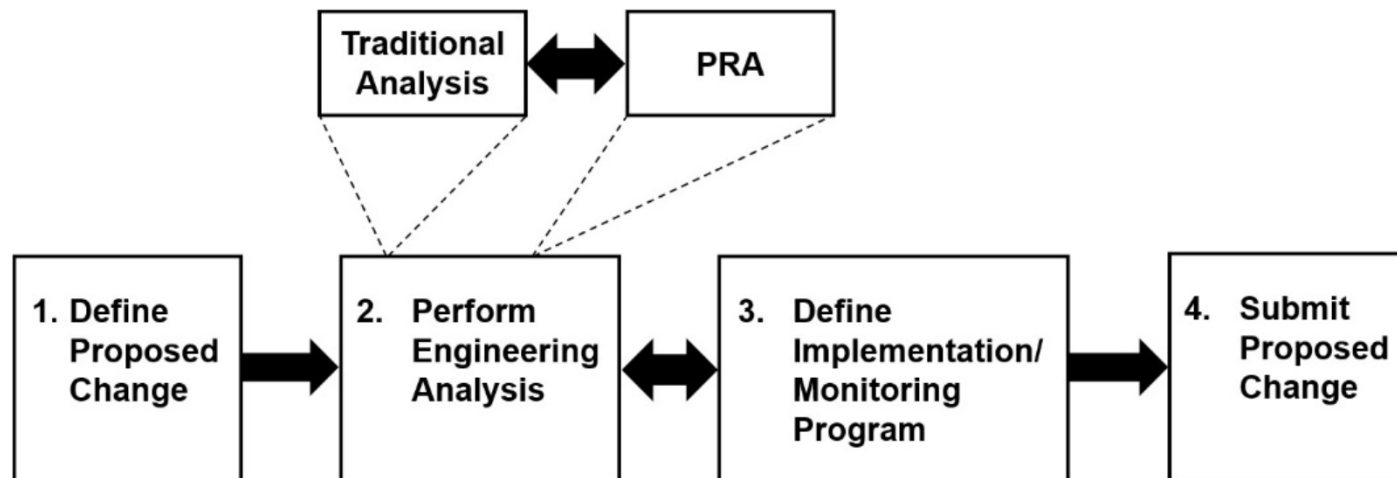
Risk-Informed Inservice Inspection

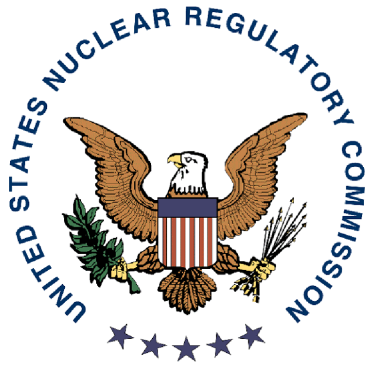
**US Nuclear Regulatory Commission (NRC)
Four Element Risk-Informed Approach**



Risk-Informed Licensing Base Changes

The four element approach defined in RG 1.174





1. Define the Proposed Change

- A list of all the all the types of valves binned into groups
- The function each type of valve group performs (may require sub-groups)
- How position indication for valves in each group are currently verified
- Types of failures associated with position indication
- How these failures impact risk or PRA

(If all valves are listed, the first three bullets may be simplified)



2. Perform Engineering Analysis

- The proposed change in verification procedures
- The types of changes to failures or failure rate associated with the proposed change
- The consequences of each failure mode and how each of these failures impact PRA or an existing risk-informed program.
- Includes an evaluation of :
 - Associated change in risk for each valve failure in all its modes
 - Associated impact of failure on safety margins
 - Associated impact of failure on defense-in-depth



3. Define Implementation/Monitoring Program

4. Submit Proposed Change