



W29 Transformation through Risk-Informed Licensing Initiatives

Risk-Informed Licensing

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PRA Licensing Branch A

Division of Risk Assessment

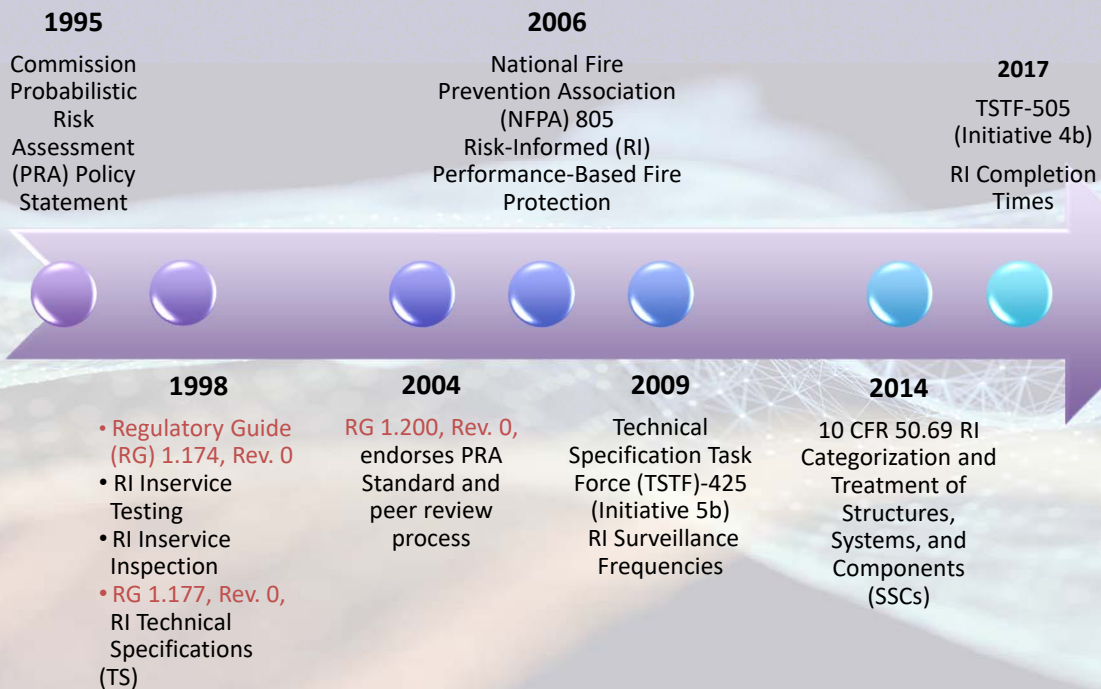
Office of Nuclear Reactor Regulation



A “risk-informed” approach to regulatory decision-making represents a philosophy whereby risk insights are considered together with other factors to establish requirements that better focus licensee and regulatory attention on design and operational issues commensurate with their importance to public health and safety.*

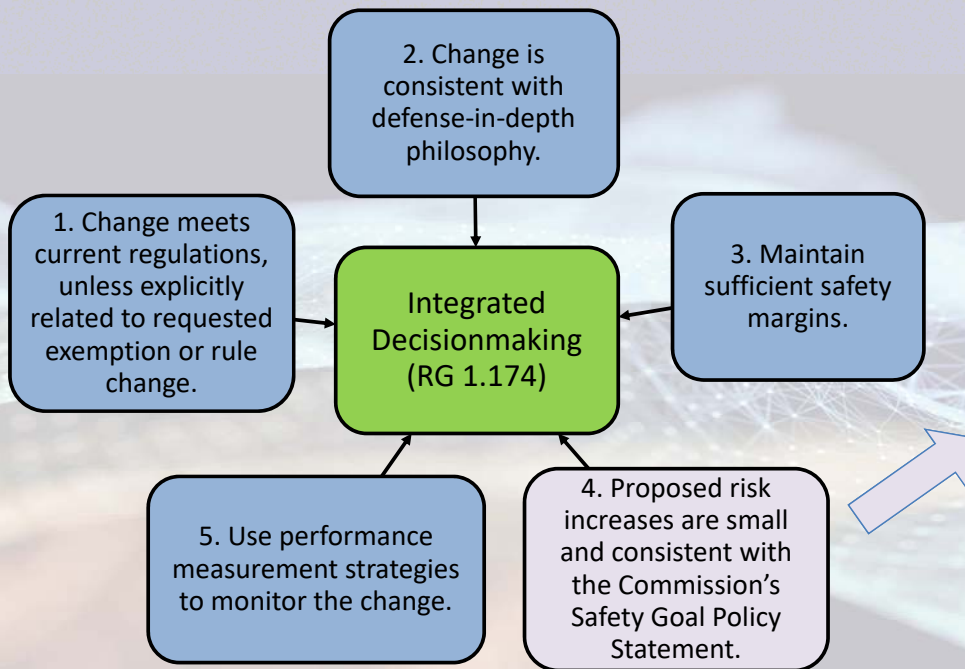
“Staff Requirements—SECY-98-144—White Paper on Risk-Informed and Performance-Based Regulation,” dated March 1, 1999
<https://www.nrc.gov/reading-rm/doc-collections/commission/srm/1998/1998-144srm.pdf>

Increased Application of Risk-Informed Programs





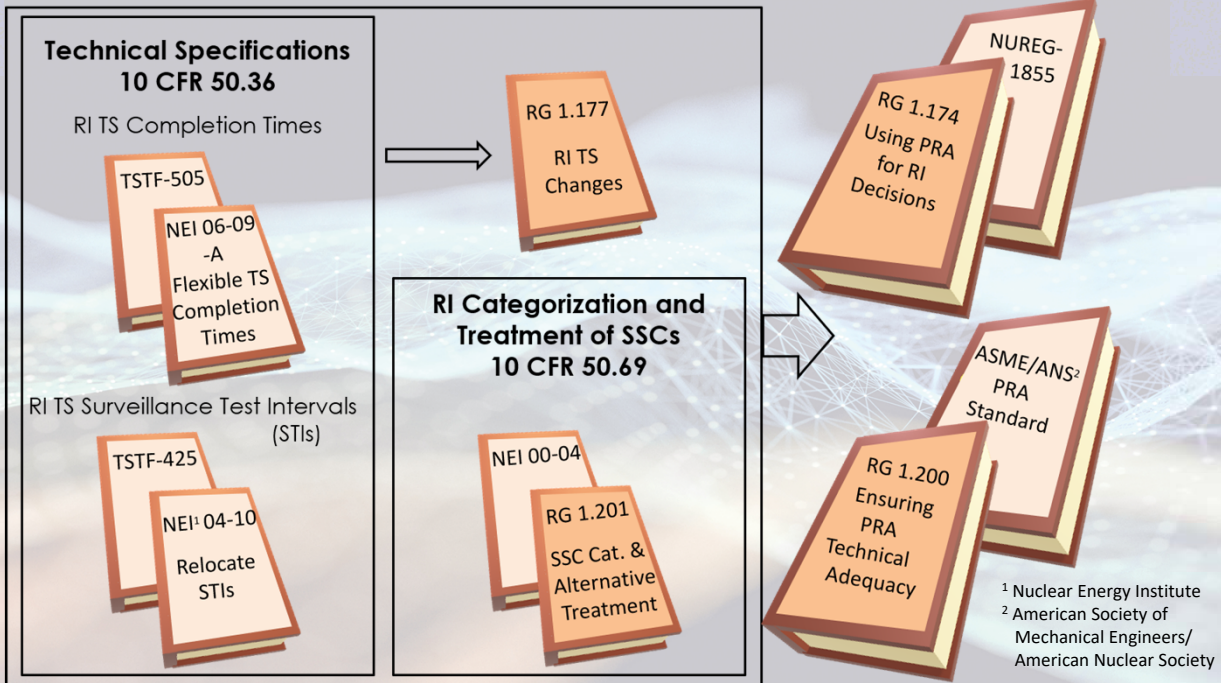
RG 1.174 Risk-Informed Principles



The more emphasis on the risk insights and on PRA results in the decisionmaking process, the more requirements on the PRA.

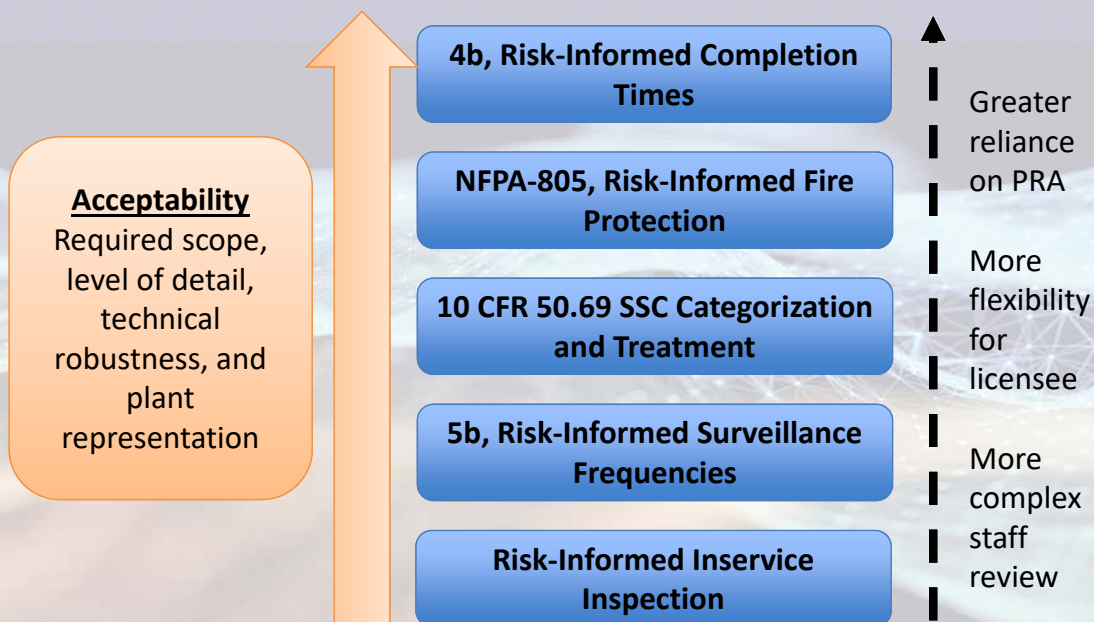


Guidance for Current Risk-Informed Licensing Initiatives



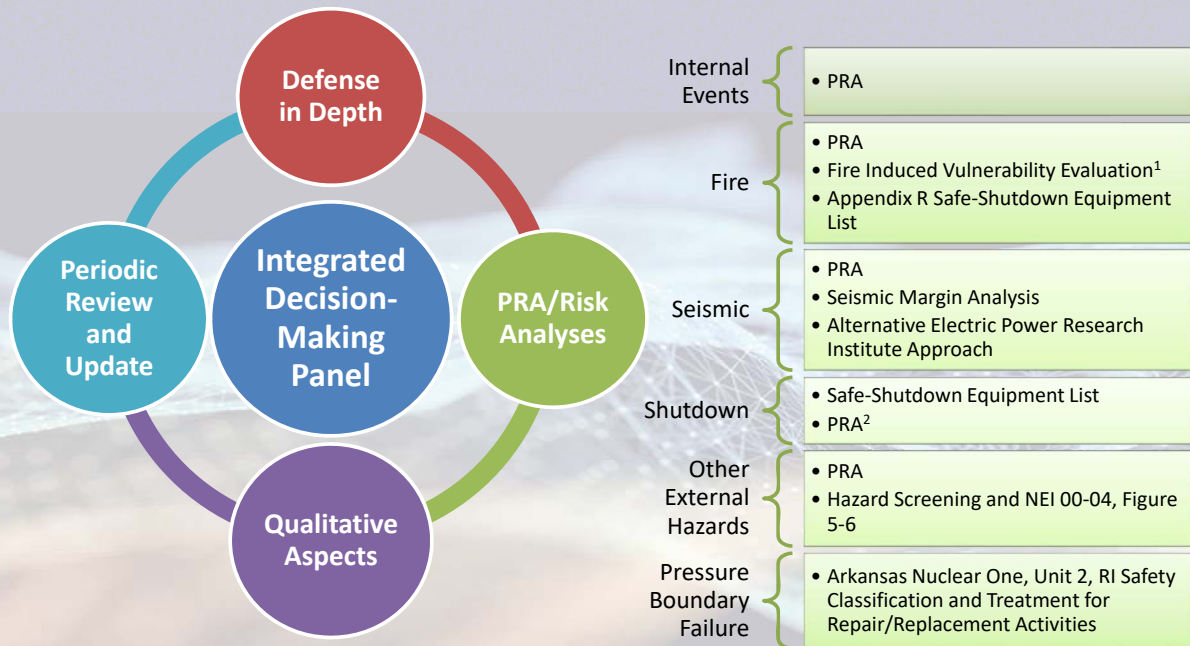


Staff Review of PRA Depends on Application





10 CFR 50.69 Risk-Informed Categorization



¹ Although allowed by the guidance, it no longer represents the state of practice or the as-built, as-operated plant.

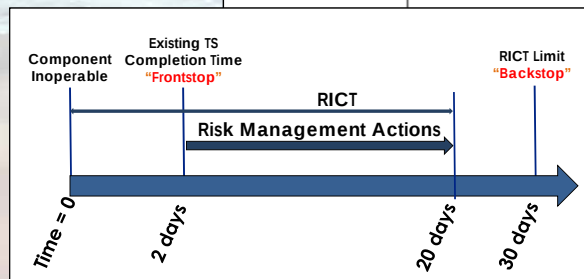
² No standard for Shutdown PRA exists at this time.



The NRC Is Prepared for Increased TSTF-505 Submittals

R - Risk
I - Informed
C - Completion
T - Times

ACTIONS		
CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Restore subsystem to OPERABLE status.	3 days <u>OR</u> In accordance with the Risk Informed Completion Time Program





Multidisciplinary NRC Review for TSTF-505, Rev. 2

Operating License

Technical Specifications Changes

Operating License Changes

PRA Information

List of Revised Required Actions to Corresponding PRA Functions

PRA Technical Adequacy

Information on Excluding Sources of Risk Not Modeled in PRA

PRA Key Assumptions and Sources of Uncertainty

Baseline Core Damage Frequency & Large Early Release Frequency

PRA Model Update Process

RICT Program

Attributes of the Real Time Risk Model

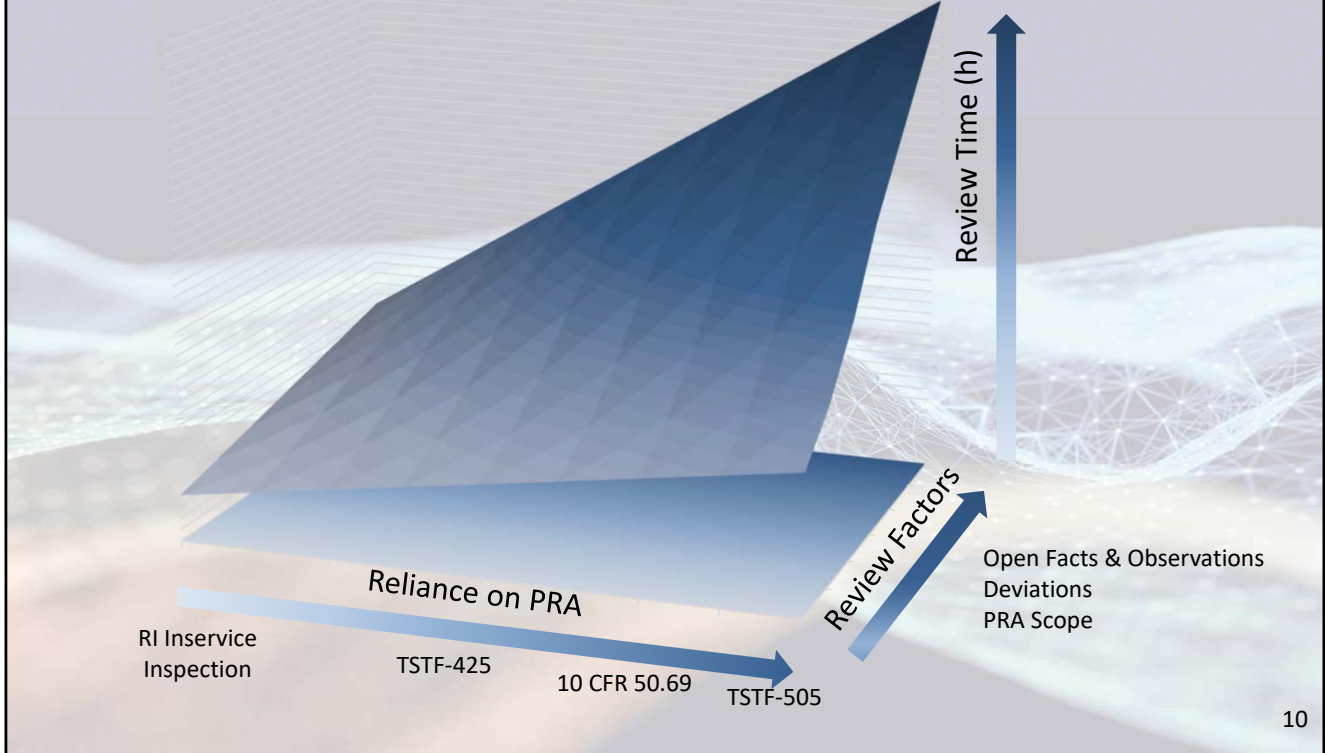
Program Implementation

Monitoring Program

Examples of Risk Management Actions

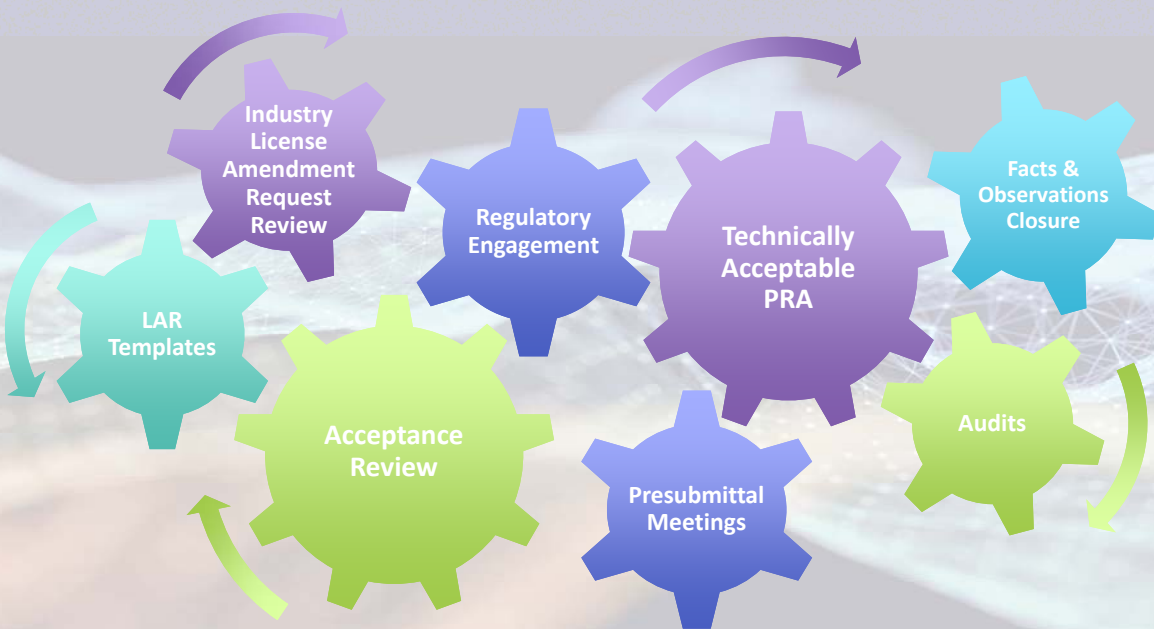


Factors Impacting Licensing Review Time



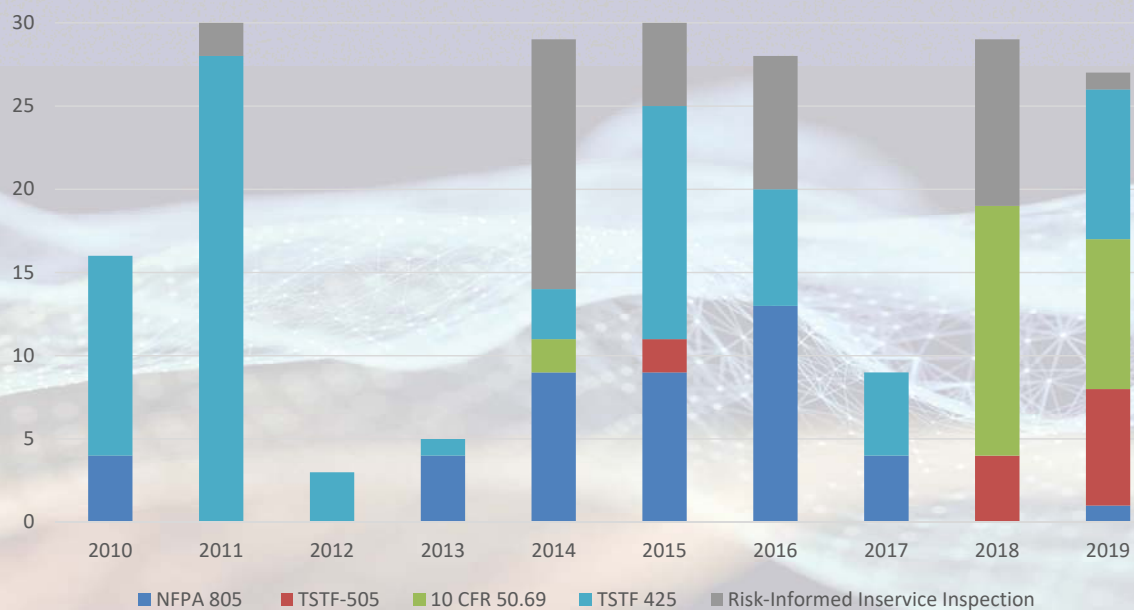


Increased Efficiency in Risk-Informed Licensing





Select Risk-Informed Programs Completed (by units)





- Increased application of risk-informed programs
- 10 CFR 50.69 and TSTF-505 increase operation flexibility while maintaining safety
- Large number of applications anticipated
- Increased submittal quality