

# A Few Perspectives on Risk-Informing Standards

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# Key Messages

- As a modern risk-informed regulator, US NRC supports development of risk-informed codes and standards and including risk insights when updating existing standards.
- US NRC has and continues to take measures to create an environment that is conducive to risk-informing codes and standards.
- For long-term success, developing risk-informed codes and standards or risk-informing existing codes and standards must harmonize with the regulatory structure (regulatory requirements, policies) and ensure that there are no unintended adverse consequences on public safety or perception.

# Some Strengths and Limitation: Prescriptive vs. Risk-Informed

## Prescriptive Standards (Detailed Step-by-Step Instructions)

### Strengths:

- Clear, unambiguous, requirements
- Easy to align on compliance, inspect and enforce
- Strong defense-in-depth baseline
- Less reliant on modeling uncertainties

### Limitations:

- Can be rigid, overly conservative
- May not address unique risks
- May misallocate resources
- Difficult to incorporate new information

## Risk-Informed Standards (Data-Driven Insights (e.g., PRA) to Focus Effort

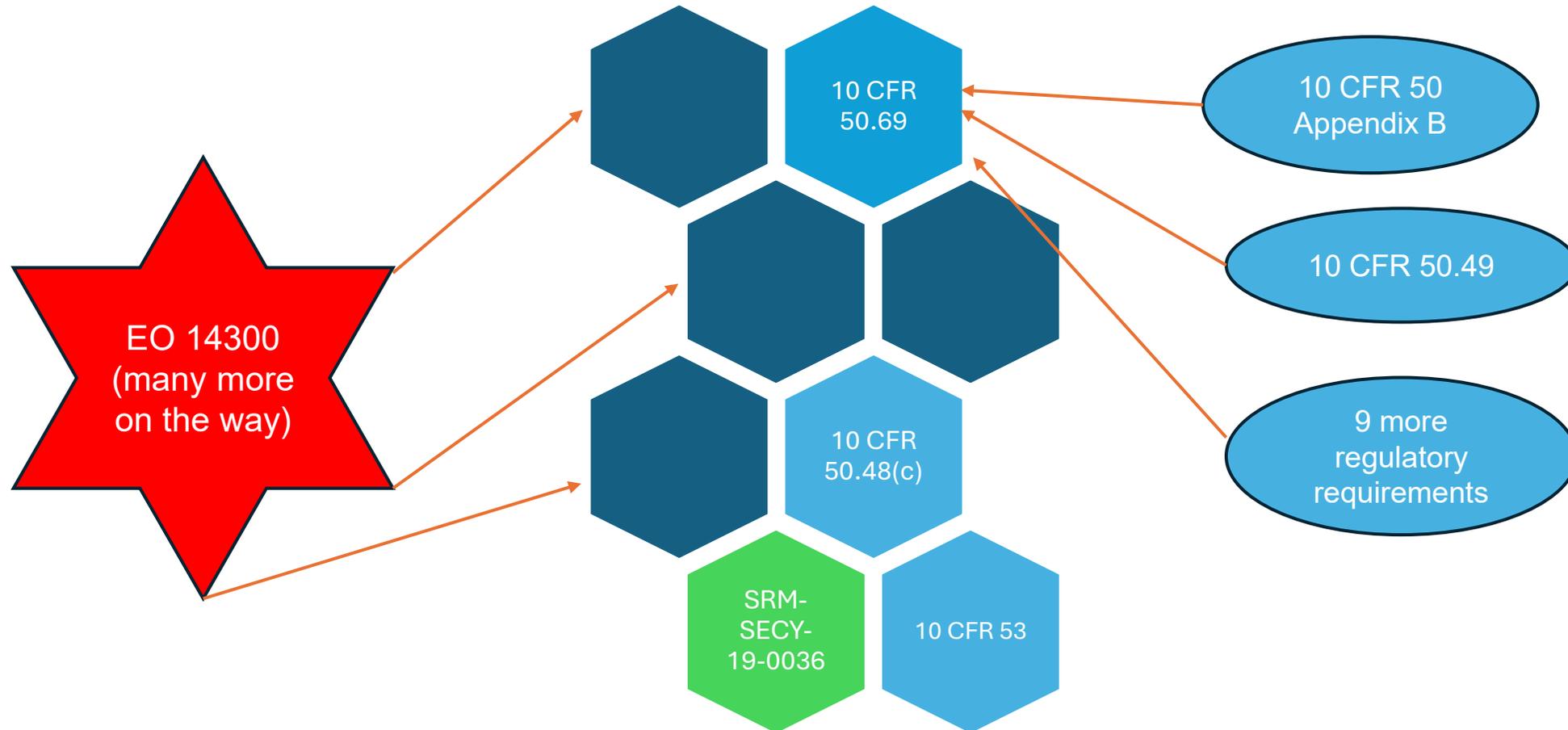
### Strengths

- Focus safety where it matters most
- Improve operational safety
- Better treatment complex interactions
- Allows for innovation

### Limitations:

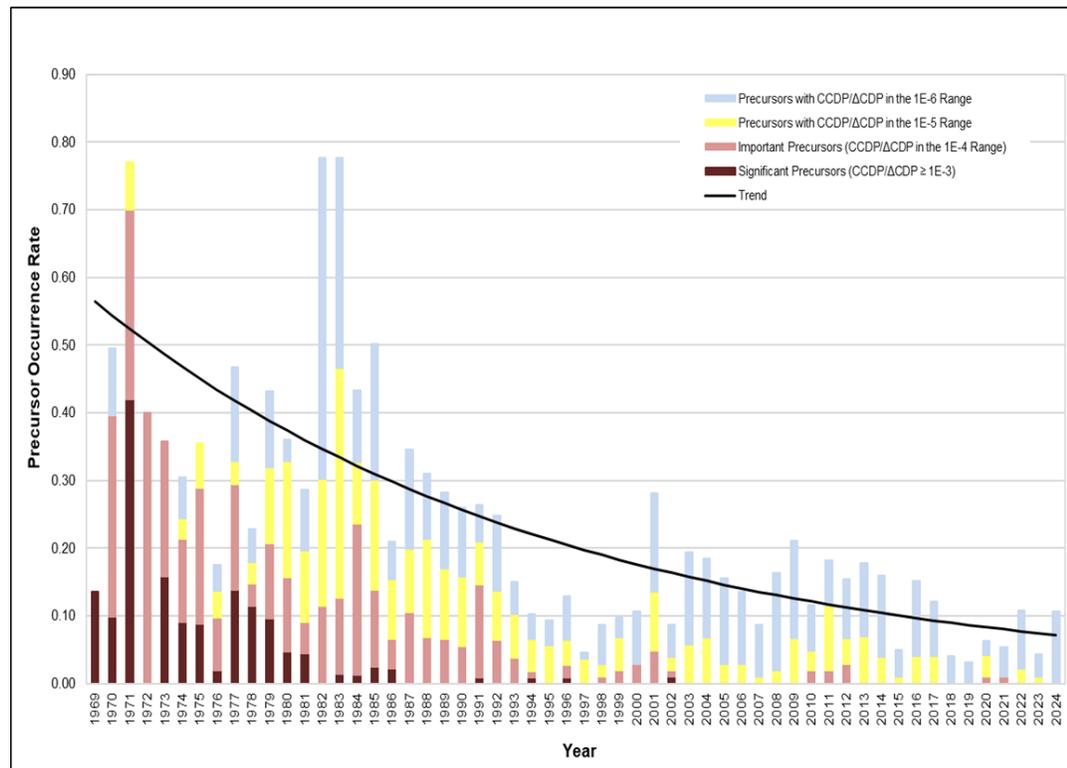
- More complex to implement
  - Requires expertise and high-quality data
- Difficult to align on compliance, inspect and enforce
- Less intuitive to the public

# Enabling the Development of Risk-Informed Standards; Examples of US NRC Initiatives



# Guard Rails for Long-Term Success

Based on the ASP indicator, the United States Industry safety trend continues to improve



U.S. Public Support for Nuclear Power (1975-2022)

