A Proposed Risk Management Regulatory Framework

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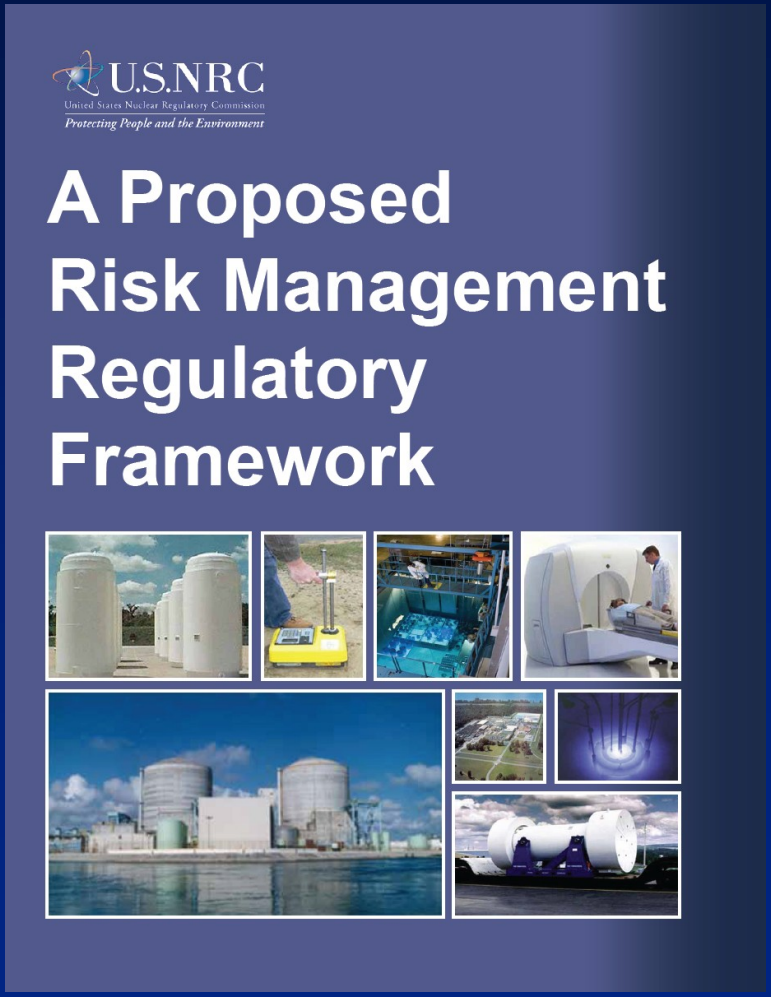
Risk Management Task Force

- Task force commissioned by Chairman Jaczko, headed by Commissioner Apostolakis
- Input from all major NRC program areas.
- Presented findings and recommendations in April 2012 (NUREG-2150)



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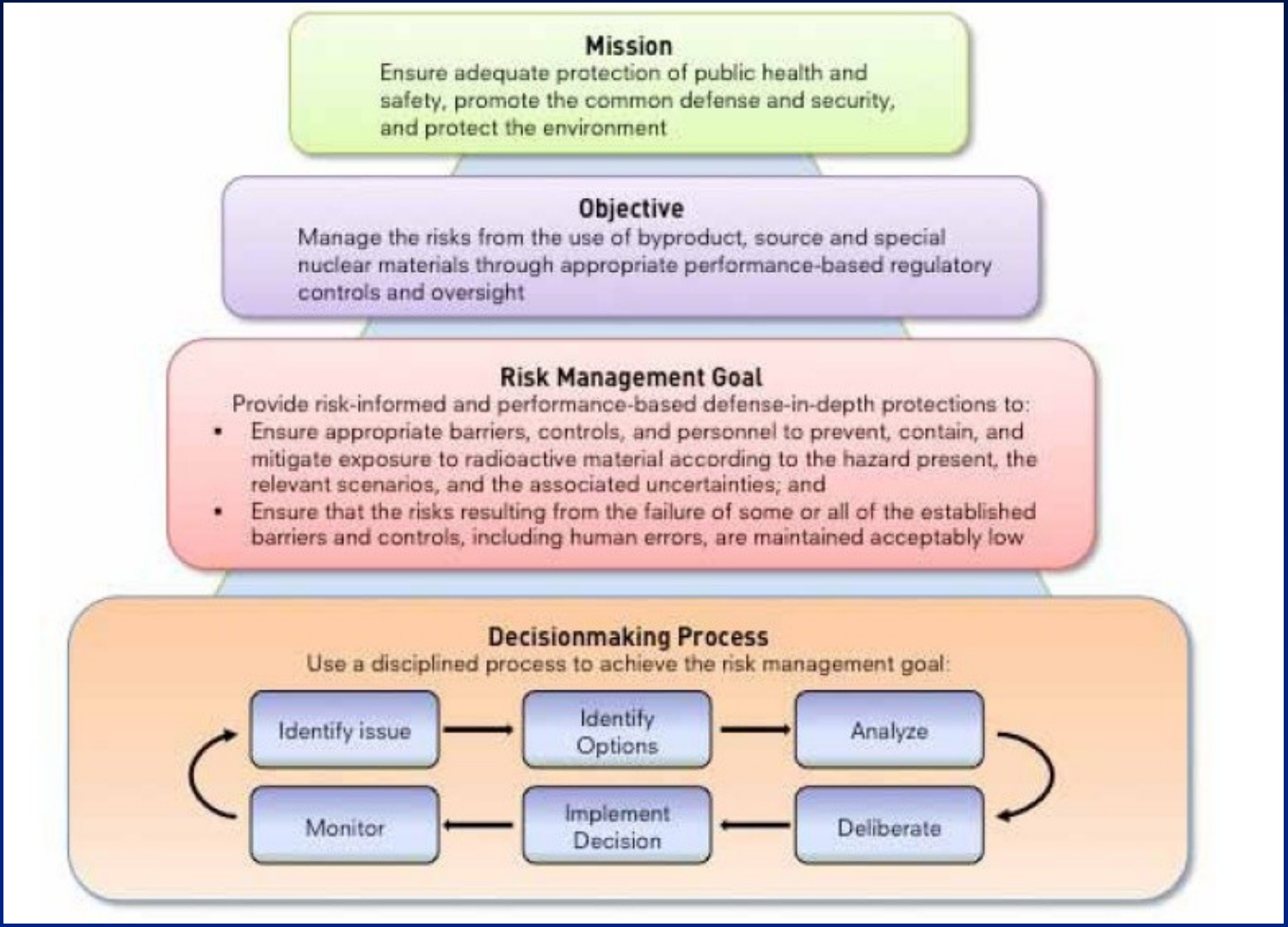
Risk Management Task Force

- Was chartered to develop options for adopting a more comprehensive, holistic, risk-informed, performance-based regulatory approach
- Recommended that NRC formally adopt a proposed Risk management Plan through a Commission Policy statement

Proposed Risk Management Framework



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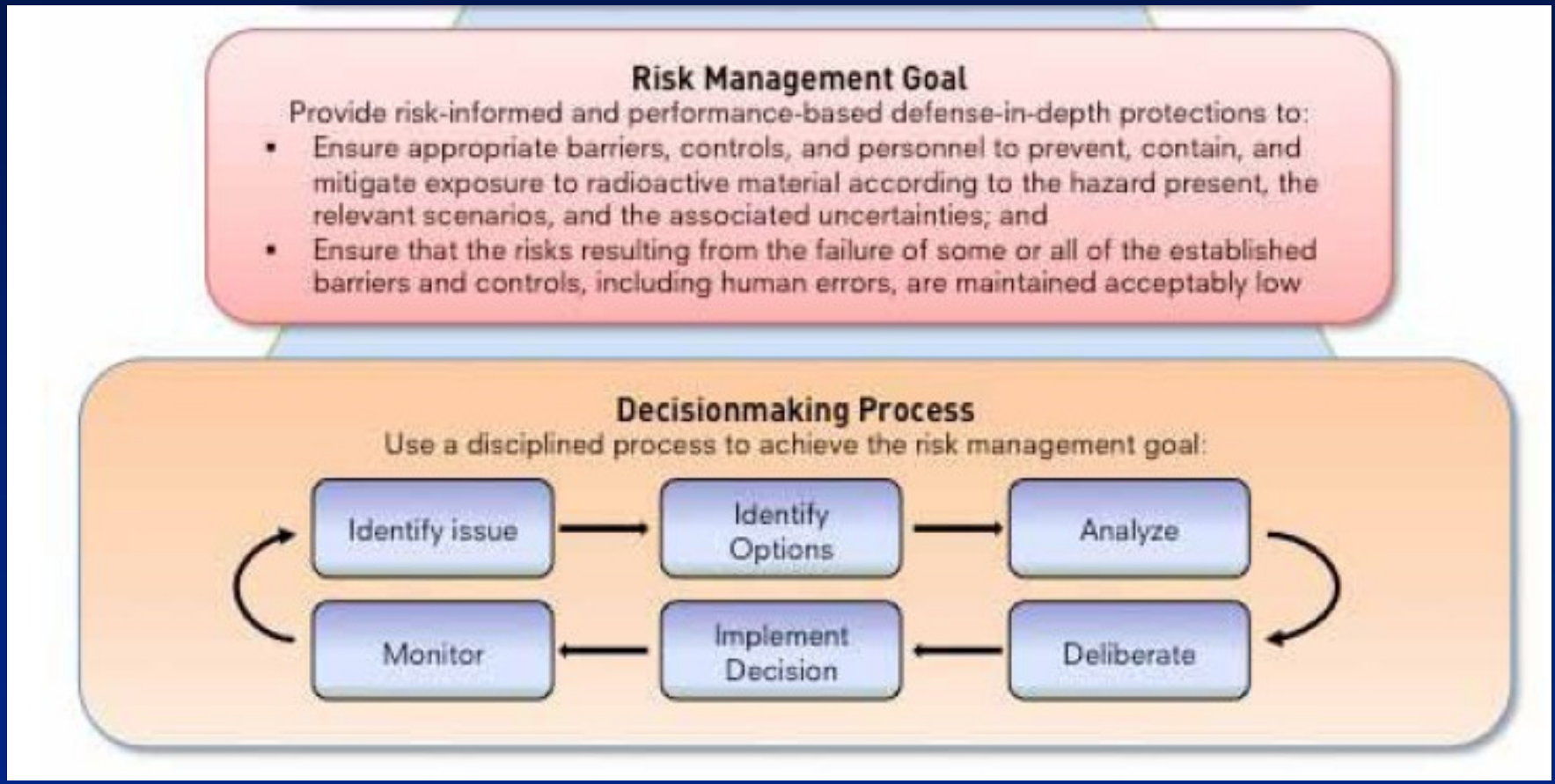
Goal and Decision Making Process



Findings for Spent Fuel Storage

- Regulatory approach based largely on using applicable industry standards and conservative guidance to ensure adequate safety margins
- Concept of defense in depth not consistently or explicitly applied in regulatory program.

Recommendations for Spent Fuel Storage

- NRC should develop additional risk information, decision metrics and numerical guidelines to use in risk management
- NRC should consider the concept of defense in depth explicitly and evaluate its proper use in the storage regulatory program.

Defense in Depth

Risk-informed and performance-based defense-in-depth protections:

- Ensure appropriate barriers, controls, and personnel to prevent, contain, and mitigate exposure to radioactive material according to the hazard present, the relevant scenarios, and the associated uncertainties; and
- Ensure that the risks resulting from the failure of some or all of the established barriers and controls, including human errors, are maintained acceptably low.

Findings for Transportation

- The current regulatory approach uses several elements of the proposed risk management framework
- While risk assessments have been done for spent fuel, there is a lack of risk information on the transportation of other radioactive materials.

Recommendations for Transportation

- Risk management should focus on implementation guidance and be used to inform IAEA deliberations on transportation regulations
- Risk insights could be used to justify domestic regulations differing from IAEA and could be used to make gradual changes and add flexibility to US regulations