

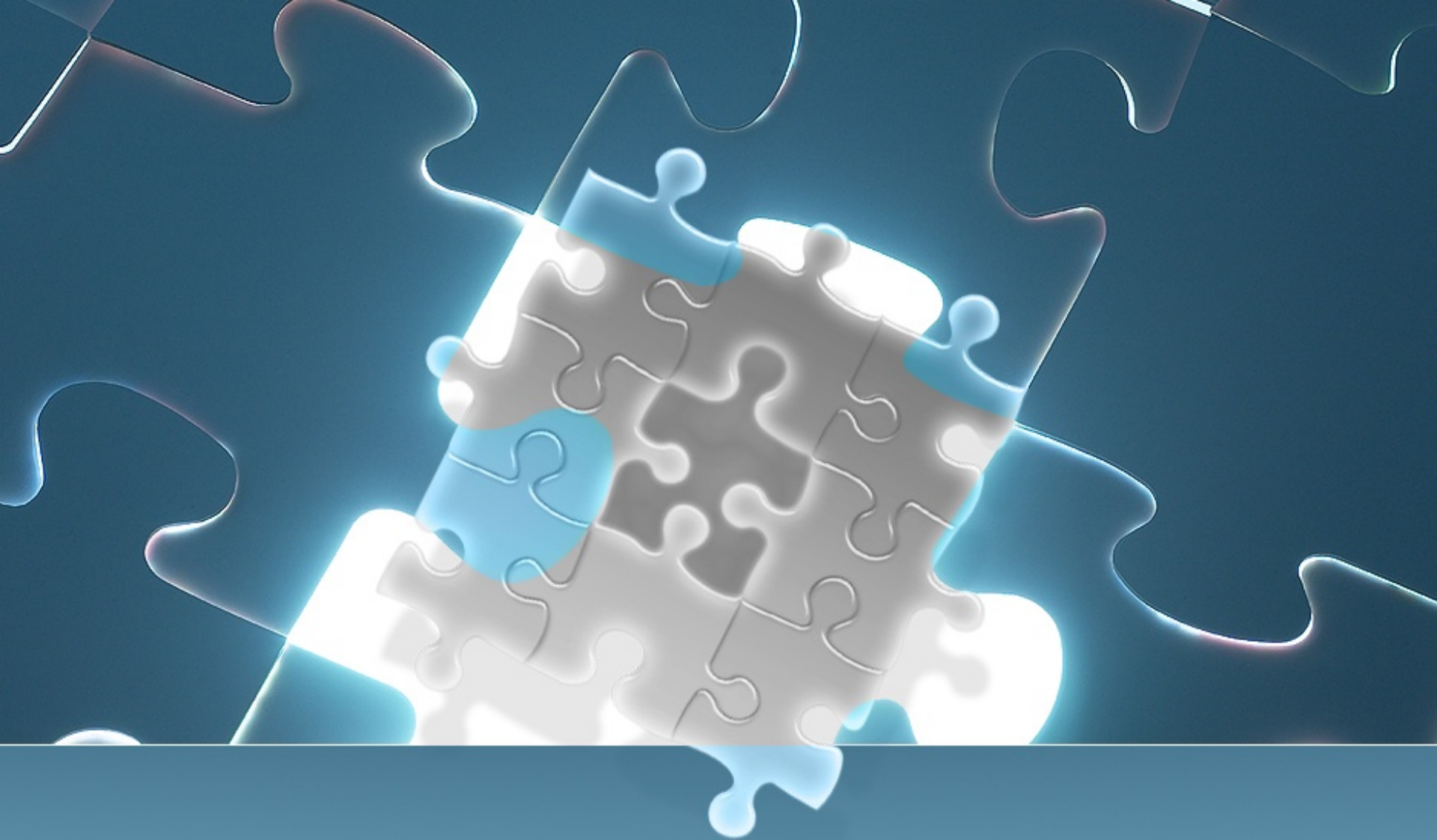


Bilateral Discussion Between U.S. NRC and FANR
Al Ahliya Building
Yas Meeting Room

Joseph Giitter
Director, Division of Risk Assessment
Office of Nuclear Reactor Regulation

OUTLINE

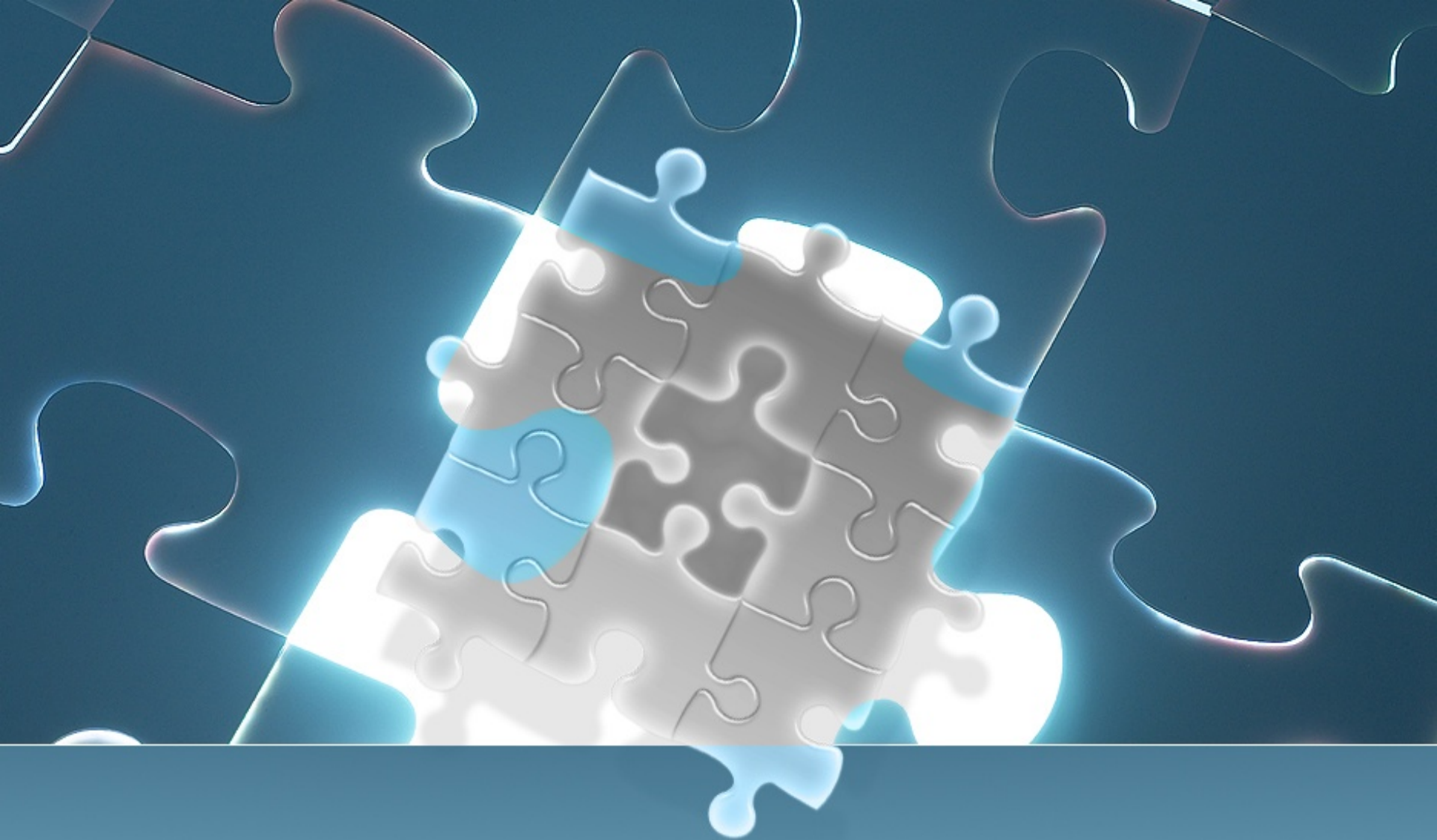
- Knowledge Management
- Risk Management
- Human Capital



Knowledge Management

Knowledge Management

- Significant percentage of the NRC workforce eligible to retire now or within the next couple of years.
- Examples of initiatives to address this concern.
 - Videos of experts on particular subjects
 - Technical seminars
 - Assignment of mentors
 - Publication of Knowledge Management NUREGs
 - NRC Historian
 - Specialized approaches in certain skill areas (e.g., Grow your own PRA program.)



Risk Management

Major activities related to risk management

- Review of NFPA 805 License Amendment Requests
- RITS License Amendment Requests
- 50.69 pilot
- GSI-191
- Implementation of flooding and seismic aspects of Near Term Task Force (NTTF) Recommendation 2.1
- NTTF Recommendation 1
- Risk Management Task Force Report
- Commission SRM to explore the use of risk insights to prioritize plant modifications

Alternate Seal Injection Pump





United States Nuclear Regulatory Commission

Protecting People and the Environment

NFPA 805 Modification -Very Early Warning Fire Detection System





***Traditional “Deterministic”
Approaches***

- **Unquantified Probabilities**
- **Design-Basis Accidents**
- **“Structuralist” Defense in Depth**
- **Can impose heavy regulatory burden**
- **Incomplete**

***Risk-
Informed
Approach***

- **Combination of traditional and risk-based approaches**

***Risk-Based
Approach***

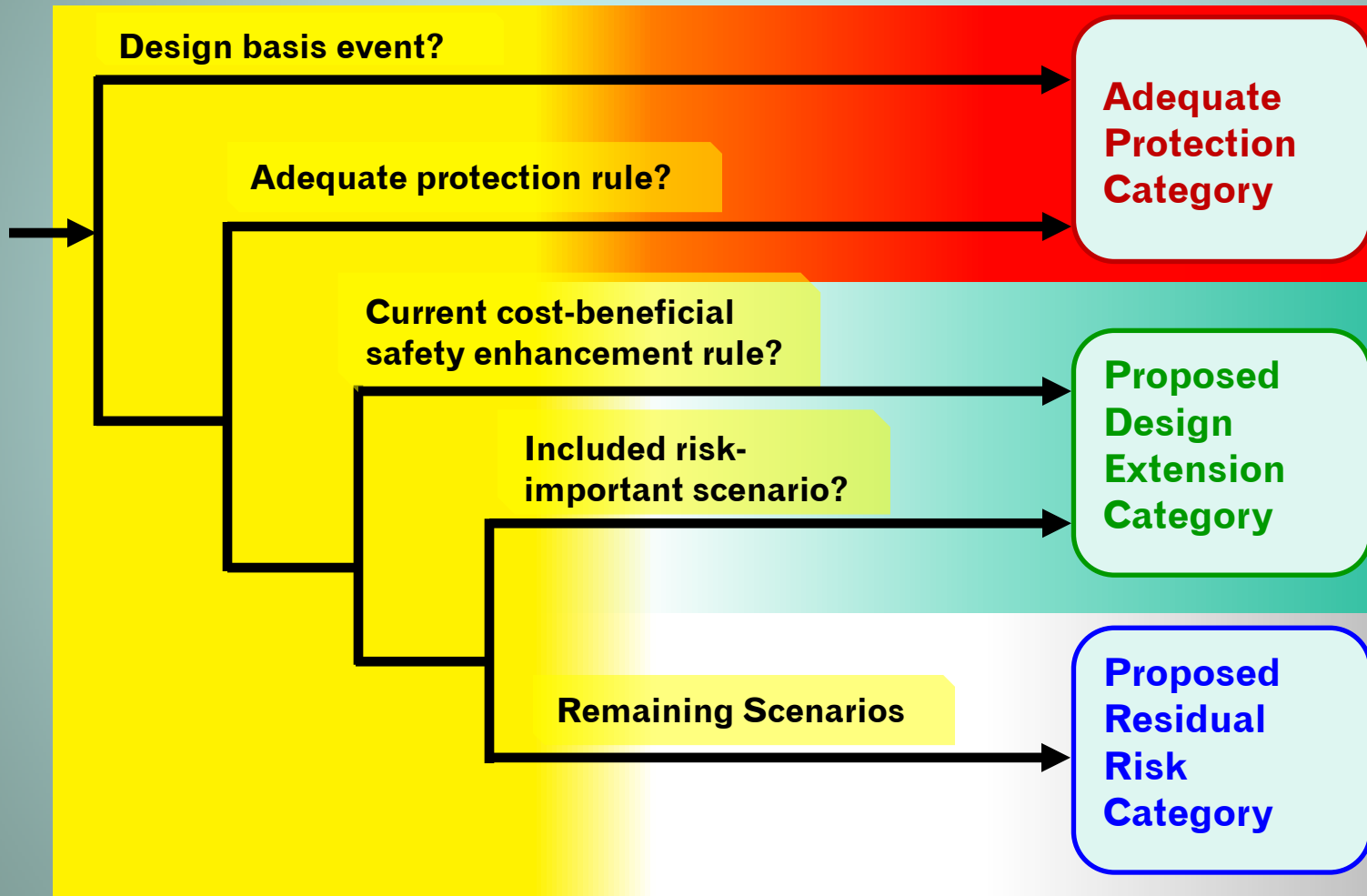
- **Quantified Probabilities**
- **Scenario Based**
- **Realistic**
- **“Rationalist” Defense in Depth**
- **Incomplete**
- **Quality is an issue**



U.S. NRC

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Protecting People and the Environment





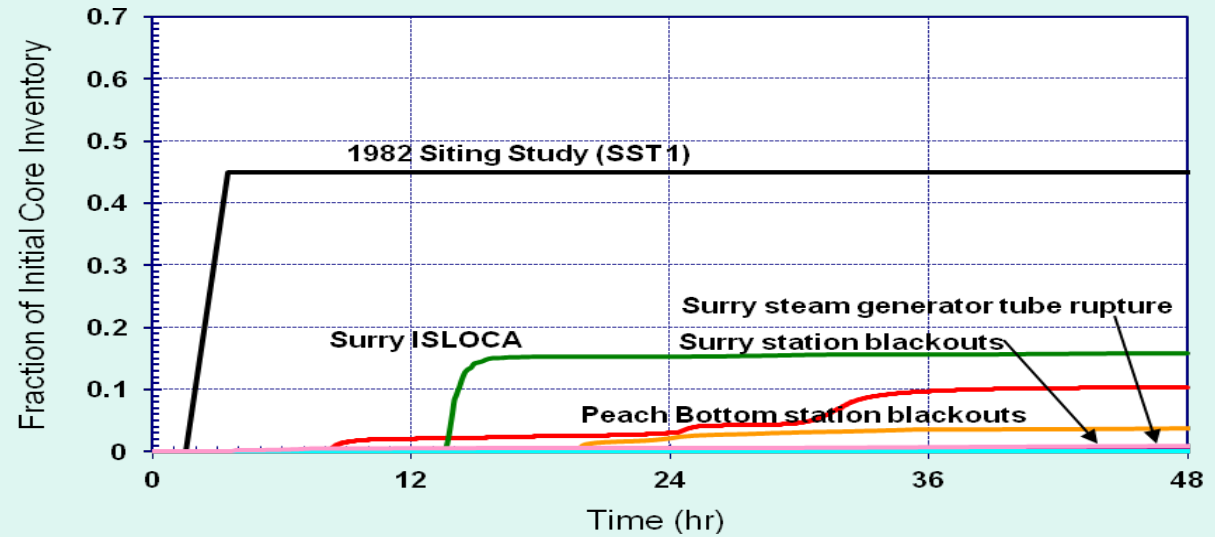
United States Nuclear Regulatory Commission

Protecting People and the Environment

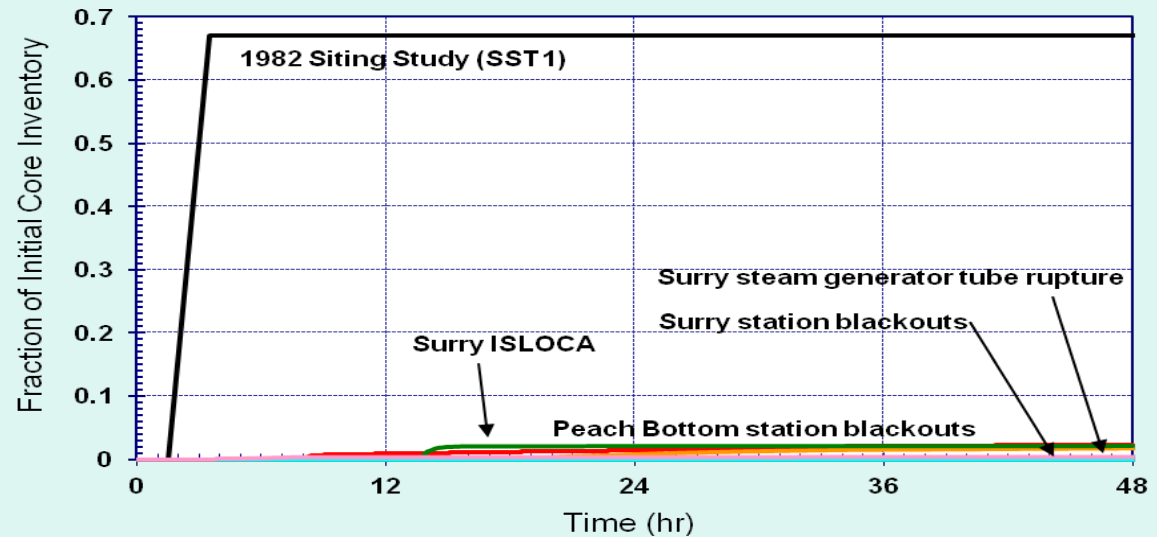
Several Major Research Initiatives

- Level III PRA
- Multi-Unit Risks
- Spent Fuel Pool Risks
- Fire PRA
- SOARCA

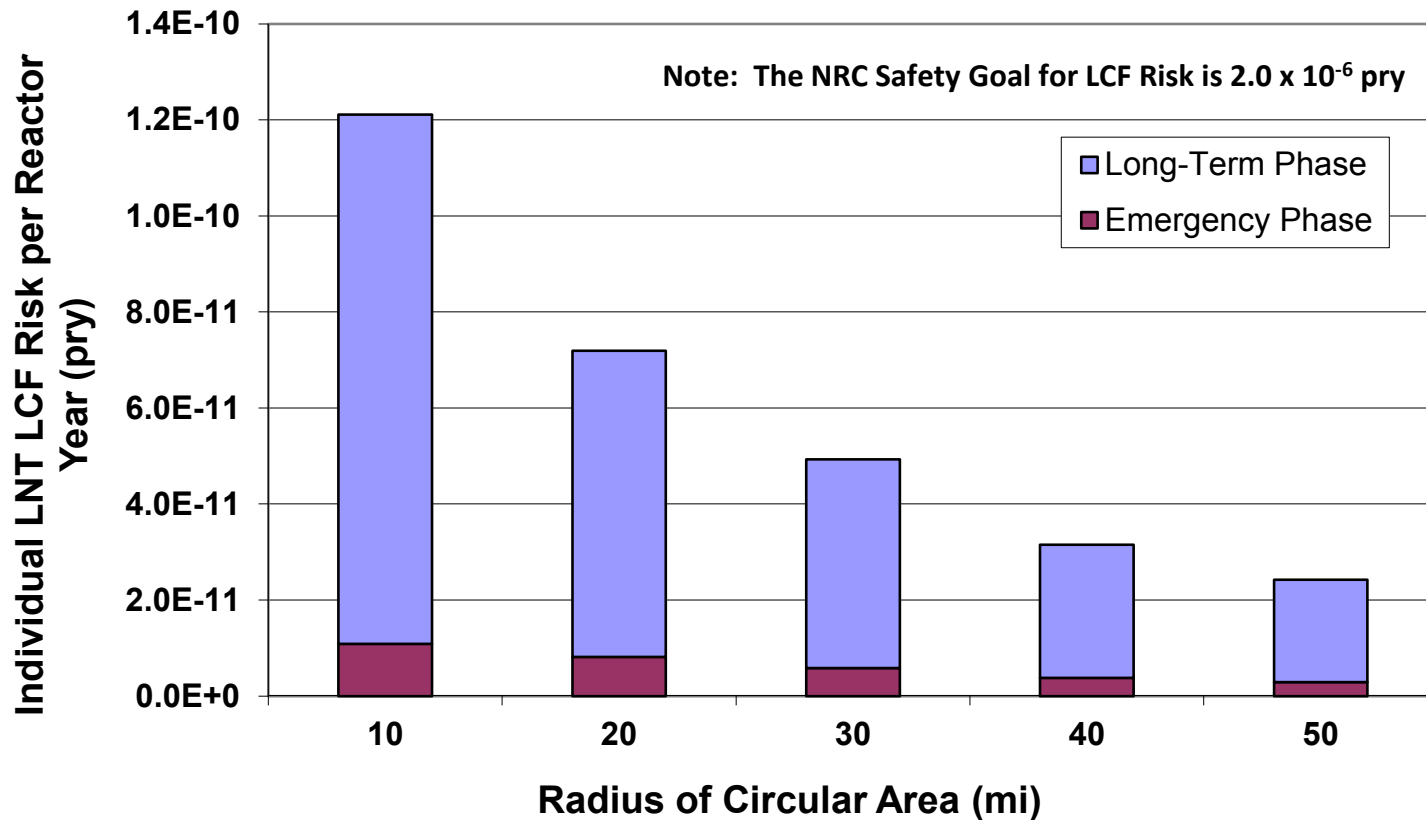
Iodine release
without 10 CFR
50.54(hh)



Cesium release
without 10 CFR
50.54(hh)



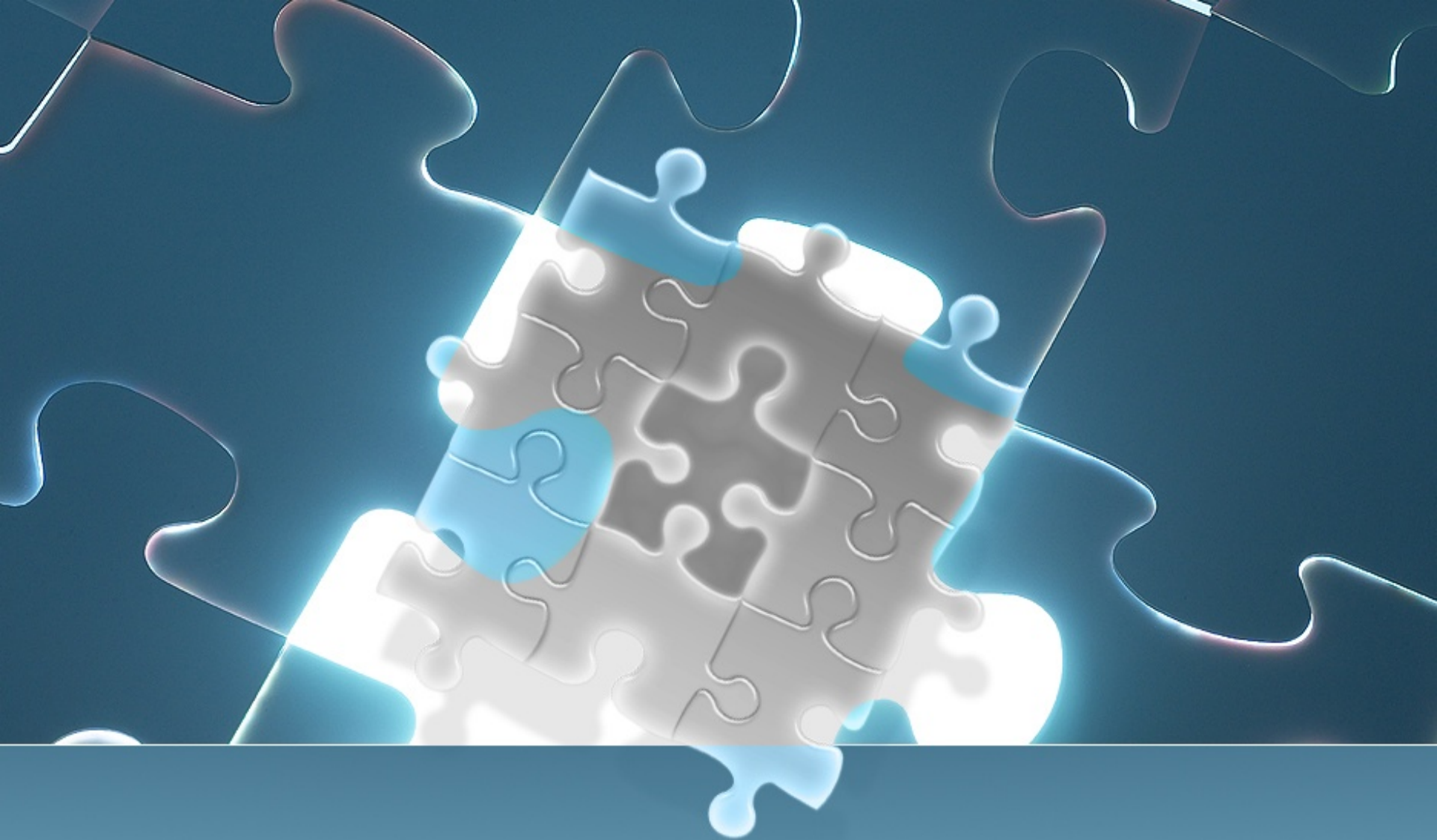
Risk is Mostly From Returning Home After the Accident



Surry Unmitigated STSBO with TISGTR

Risk Management Summary

- Unprecedented number of NRC initiatives related to risk-informed regulation.
- Regulatory framework is becoming more risk informed, but continues to emphasize defense in depth and safety margins.
- The natural progression of some these initiatives will necessitate more complete PRAs.



Human Capital Discussion