

**REGULATORY INFORMATION
CONFERENCE**

Decommissioning (W17)

March 14, 2001



2/17

**Spent Fuel Pool Accident Risk
at Decommissioning Plants**

**Timothy E. Collins, Deputy Director
Division of Systems Safety & Analysis
Office of Nuclear Reactor Regulation**

Study Charter

- **Provide generic, risk-informed technical study for spent fuel pool accidents that could be used as basis for rulemaking**

- **Provide guidance that could be used while rulemaking process was ongoing**

Analysis Approach

- **Used “generic” decommissioning plant and spent fuel pool**
- **Estimated likelihood of fuel uncover**
- **Performed numerous sensitivity studies**
 - **Consequence analyses**

– Thermal-Hydraulic analyses

Analysis Approach (cont.)

- **Compared results to agency quantitative health objectives**
- **Assessed Emergency Preparedness relaxation consistent with RG 1.174**

Stakeholder Interactions

- **2 draft reports issued for public comment**
- **15 different organizations or individuals provided comments**
- **14 open meetings held with stakeholders**
- **5 open agency meetings
(Commission and ACRS)**

Technical Findings & Conclusions

- **Spent fuel pool accident risk is low**
- **Agency quantitative health objectives are met**
- **Consistent with RG 1.174**

- **EP relaxation after 60 days is consistent with a “small change” in risk**

Technical Findings & Conclusions (cont.)

- **Criterion of sufficient air cooling to preclude a significant release cannot be satisfied on a generic basis**
- **Research on source term generation in air environment would be useful in reducing uncertainties**

Regulatory Implications

- **No immediate safety concerns**
 - **Immediate regulatory action not needed**
 - **Low likelihood of fuel uncover event resulting in significant off-site radiological release**

- **Staff granted exemptions based on sufficient cooling for reasonably conceivable situations**

Policy Development

Based on reasonable assurance of adequate protection of public health and safety:

- **Provide a risk-informed, performance-based approach to exemptions for decommissioned sites**

- **Establish a similar approach for rulemaking**

Summary

- **SFP accident risk is low**
- **No immediate safety concerns**
- **Future Milestones**
 - **Policy options paper:**
 - **Action plan on existing exemptions, rulemaking plan schedule**

5/31/01

**60 days after SRM
on policy options
paper**