

1/21/04 Commission Mtg,

## **Status of SFP Evaluation**

- Summary
- Background
- Mitigation Strategies
- Recently completed analysis
  - Confirmatory testing
- Follow-on activities
  - NAS review
  - Analysis (other pools, scenarios)

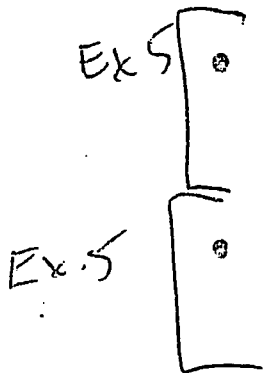
*Handwritten:* 2004-03-01

Information in this record was deleted  
in accordance with the Freedom of Information  
Act, exemptions 5  
FOIA 2004-03-01

*Handwritten:* 2/20  
1/21/04

# ***SFP Summary***

- Spent fuel pool design characteristics (both structural and thermal hydraulic) make them resistant to events which might lead to fuel damage
- Evaluation and improved calcs provide a measure of extant safety margins
- Mitigation strategies have been identified



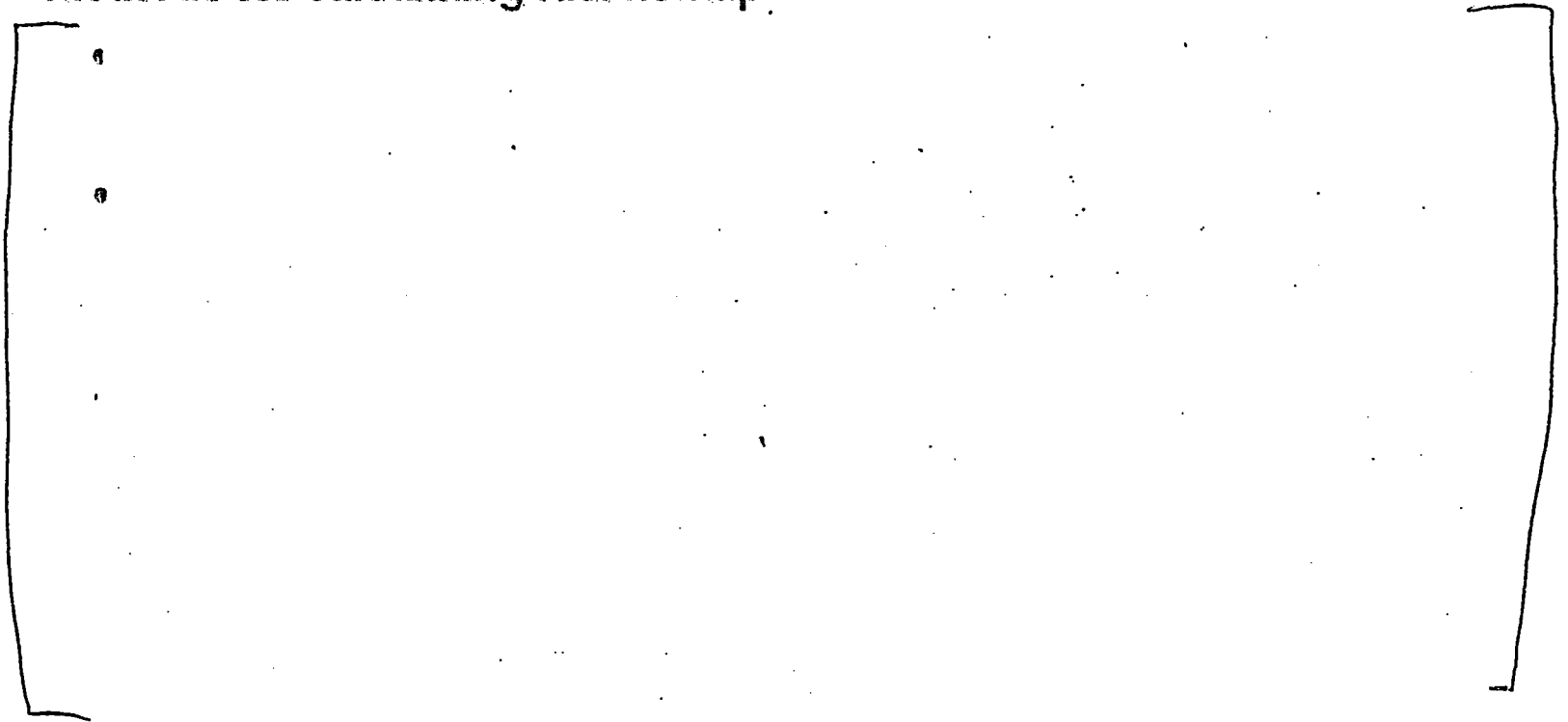
- Independent technical peer review

# ***SFP – Background***

- **NRC Vulnerability Project**

- Preliminary work focused on development of best-estimate models and methods for calculating fuel heatup

Ex.  
5



# ***Confirmatory Testing***

- Testing planned for confirming spent fuel pool modeling of T/H and accident progression
- Confirmation of modeling adequacy
  - Natural circulation flow – laminar flow conditions, bypass area
  - Radiative (and convective) heat transfer
  - Transient oxidation behavior
- Confirmation of mitigation
- Small scale air oxidation kinetics testing has been completed

Ex. 5

Ex. 5

Ex. 5

# ***Follow-On Activities***

- **NAS review**
- **Follow-up analysis of BWR pool**
  - Scenario variations
  - Geometry changes
  - Mitigation strategies
  - Consequences analysis
- **PWR pool analysis**
- **Development of generalized screening criteria**

# ***Follow-on Activities***

- **NAS Review**

Preliminary public mtg- 12/3/03

Ex. 5



Alvarez et al – modification of original position on all older fuel,  
acknowledgement of error in their cost benefit analysis

Selection of 10 member panel near complete

# NAS Review

- Proposed 1<sup>st</sup> Mtg – 2 days

EX.  
5