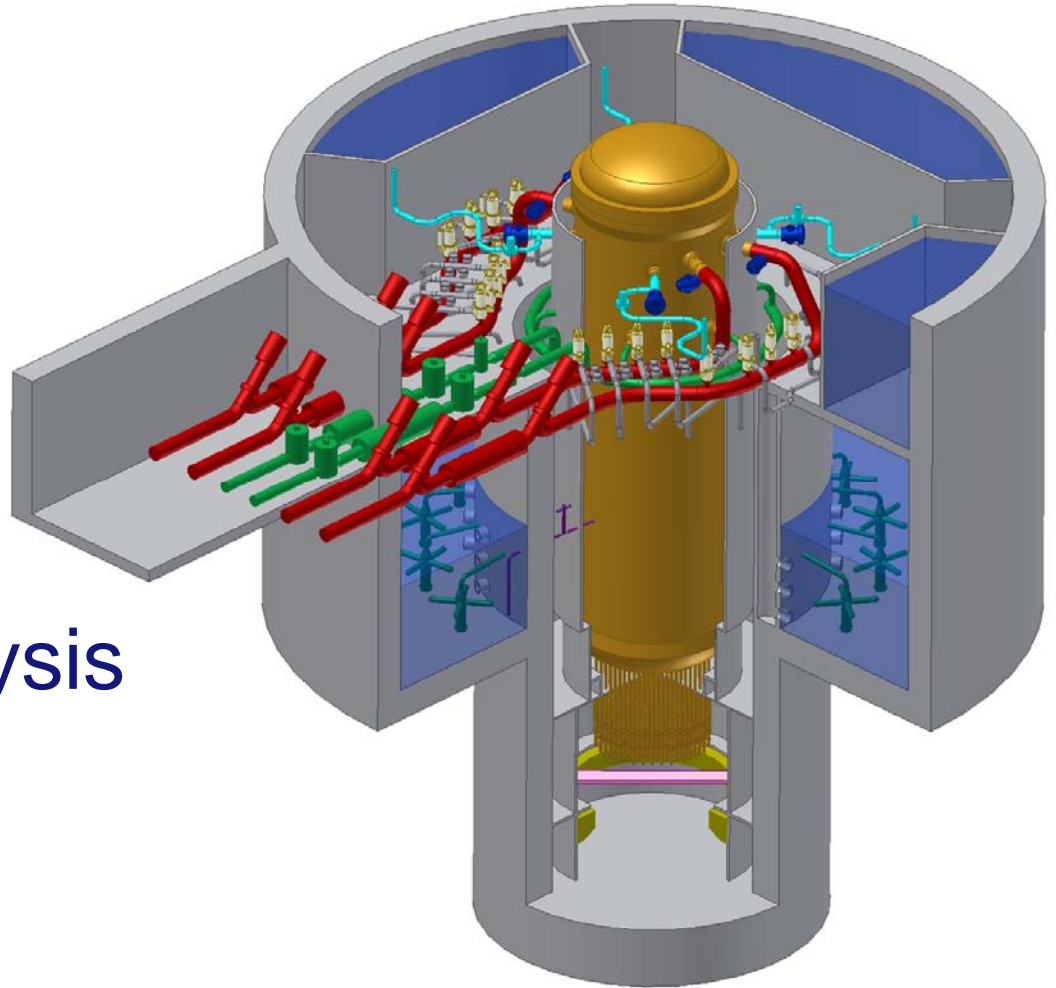


# NRC-ESBWR DCWG Meeting



Fire Hazards Analysis  
Verification  
April 22, 2009

# Opening Remarks

## Purpose:

- > Continue discussion regarding the approach for revising COL Holder Item 9.5.1-7-H, *FHA Compliance Review*, for DCD Rev. 6
- > Obtain NRC concurrence regarding the DCWG approach

## Background:

- > Revision of COL Holder Items discussed at the February 11 and April 1, 2009 DCWG Meetings
- > NRC provided feedback that the COL Item should be addressed via an ITAAC

# COL Holder Item 9.5.1-7-H

- DCWG does not agree the item should be ITAAC
- FHA is an element of the Fire Protection Program (FPP) – reference RG 1.189, C.1
- The operational program license condition will ensure FHA implementation
- FHA is updated as necessary to reflect programmatic and design changes throughout plant life
- There are existing COL items in DCD Appendix 9A to update the FHA for site-specific areas (i.e., the yard areas)

# COL Holder Item 9.5.1-7-H

- FPP is addressed as operational program in SECY-05-0197, *Review Of Operational Programs In A Combined License Application And Generic Emergency Planning Inspections, Tests, Analyses, And Acceptance Criteria:*
  - “The staff has concluded that a COL applicant can fully describe all the operational programs and their implementation, with the exception of EP, listed in NEI’s letter dated August 31, 2005. Therefore, if these programs and their implementation are fully described, they will not require ITAAC.”

# COL Holder Item 9.5.1-7-H

- Critical fire protection design features that warrant ITAAC are already addressed in existing DCD ITAAC:
  - 2.16.3 – Fire Protection System
    - Water storage
    - Barriers
    - Fire Pumps
    - Detection capability
    - Alarms, controls, displays, procedures
  - 2.16.5 – Reactor Building
    - Fire barriers, separation
  - 2.16.6 – Control Building
    - Fire barriers, separation
  - 2.16.7 – Fuel Building
    - Fire barriers, separation
- Existing fire protection DCD ITAAC address SRP 14.3.7, *Plant Systems - Inspections, Tests, Analyses, And Acceptance Criteria*\*
- Other elements of the FHA do not satisfy ITAAC selection criteria (e.g., control of combustibles, compensatory measures)

\*SRP 9.5.1 states: SRP Section 14.3 should be followed for the review of ITAAC.

# COL Holder Item 9.5.1-7-H

- Alternate approaches or compensatory measures are often utilized in the FHA which make FHA verification not suitable for ITAAC
  - For example, no fire suppression in main control room areas; compensatory measure is to control combustible material
- Expected deviations recognized in Draft RG DG-1214, *Fire Protection for Nuclear Power Plants*, Section 1.2, *Fire Hazards Analysis*:
  - “The fire hazards analysis...should identify and justify any deviations from the regulatory guidelines. Justification for deviations from the regulatory guidelines should demonstrate that an equivalent level of protection will be achieved...”
- Addressing these expected deviations through an ITAAC is not appropriate and would require extraordinary and unnecessary level of regulatory processing (e.g., exemptions and potential hearings)

# COL Holder Item 9.5.1-7-H

- A similar operational program element requires updating prior to fuel load- NAPS COLA, Section 6.6.7.1, Flow Accelerated Corrosion (FAC) Program
  - Prior to start-up, the program is adjusted based on a comprehensive FAC-susceptibility screening of as-fabricated piping to identify any plant systems that may be susceptible to FAC degradation

# COL Holder Item 9.5.1-7-H

- The following revised text is proposed for this COL Holder Item:
  - The COL applicant will provide a milestone for completing a review of the FHA against as-built conditions and updating the FHA, as necessary. The updated FHA will demonstrate that:
    - A postulated fire in any area of the plant (including areas that don't contain structures, systems or components important to safety but could pose a hazard to safe shutdown) will not prevent safe shutdown of the plant
    - Fire protection for redundant shutdown systems in the reactor containment building will ensure that one shutdown division is free of damage
    - A postulated fire in the control room will not prevent the ability to achieve and maintain safe shutdown. The completed analysis also demonstrates that this assurance is provided by an alternative shutdown capability that is physically and electrically independent of the control room



# COL Holder Item 9.5.1-7-H

- NRC desire for higher level requirement can be satisfied through a License Condition
- The FHA will be added as a sub-item under the FPP in COLA Table 13.4-201, *Operational Programs Required by NRC Regulations*
- An implementation milestone of fuel load will be assigned to the FHA
- Being included in Table 13.4-201 will subject the FHA to the license condition applicable to all of the operational programs in the table

# COL Holder Item 9.5.1-7-H - Conclusion

- Proposed revised COL Item and license condition provide adequate assurance that required actions will be accomplished to the satisfaction of the staff.

# Questions?