

*Rel. all*

**PRE-DECISIONAL INFORMATION**

**From:** Ray Gallucci *NRR*  
**To:** Paul Lain *NRR*  
**Date:** 1/30/04 10:27AM  
**Subject:** PRE-DECISIONAL. Re: Fwd: Fire & Safety 2004 Conference

Don't worry about the PRE-D in the title - that's something Sunil agreed makes sense to protect our e/mails from FOIAs.

Attached is the presentation. If John or Sunil have any changes, they will let me know.

>>> Paul Lain 01/29/04 05:52PM >>>  
Larry,

I have your paper, I'll make sure it gets included.

What I do need is a 20 minute presentation in Power Point.

Paul

>>> Ray Gallucci 01/29/04 04:26PM >>> *NRR*  
I believe you have my paper - if not, I can resend.

>>> Paul Lain 01/22/04 08:46AM >>> *NRR*  
Mark & Ray,

Talked with Fred Emerson about the presentations of our papers in Munich. He does not know the final format of the paper yet (e.g., wpd, pdf), but the presentations should be about 20 minutes long, in Power Point, and burned to a CD. We have Power Point on the shared machine by Tarsha's desk and Dan has a CD burner. The final papers are due towards the end of February, but we may need DSSA approval, so send them to me when they are done and I'll prepare a concurrence memo. Also, send the presentation ASAP and as soon as John approves, I'll have Dan put them on one CD.

Paul

**CC:** John Hannon; Sunil Weerakkody

*N-SD*

## OPERATOR MANUAL ACTIONS RULEMAKING

Raymond Gallucci, Senior  
Engineer, & John Hannon, Chief  
Plant Systems Branch  
Division of Systems Safety and  
Analysis

01/30/2004

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## OUTLINE

- Present background leading to Operator Manual Actions Rulemaking
- Define Operator Manual Actions
- Discuss acceptance criteria and their technical bases
- Examine path forward and anticipated schedule

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## BACKGROUND

- 1975 – Browns Ferry nuclear plant fire
- 1976 – USNRC Branch Technical Position ASB 9.5-1, *Guidelines for Fire Protection at Nuclear Power Plants*
- 1979 – Code of Federal Regulations, Title 10 (*Energy*), Section 50.48 (*Fire Protection*), Appendix R (*Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979*)

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## BACKGROUND

- 10 CFR 50.48 imposed fire protection (FP) requirements from App. R, Paragraph III.G.2, to pre-1/1/1979 licensed plants
  - Three acceptable methods to protect at least one shutdown train during a fire when redundant trains are located in same fire area
    - 3-hr passive fire barrier
    - 20-ft separation and no intervening combustibles, with fire detection and automatic suppression
    - 1-hr passive fire barrier with fire detection and automatic suppression

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## BACKGROUND (continued)

- For post-1/1/1979 licensed plants, App. R provisions were incorporated into Branch Technical Position (BTP) CMEB-9.5-1 and NUREG-0800 (Standard Review Plan)
  - Plant-specific FP programs and commitments were reviewed against one of these, becoming part of the post-1/1/1979 plant licensing bases (thereby incorporating the provisions of App. R, Paragraph III.G.2)

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## BACKGROUND (continued)

- In attempting to resolve FP issues related to discrediting of Thermo-Lag fire barriers in mid-1990s, some licensees opted to credit "operator manual actions" for compliance with III.G.2 rather than provide fire barriers and/or separation with detection and suppression, or seek an exemption/deviation, as required

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## BACKGROUND (continued)

- Since advent of Reactor Oversight Process in 2000, NRC FP inspections have found enough licensees relying on unapproved operator manual actions to raise a III.G.2 compliance concern
  - Unless approved as an “exemption” (pre-1/1/1979 plant) or “deviation” (post-1/1/1979 plant), such actions do not comply with III.G.2 [Committee to Review Generic Requirements, May 2002]

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## BACKGROUND (continued)

- More importantly, some of these operator manual actions may not have been feasible, thereby creating doubt that safe shutdown could be assured
- NRC and nuclear industry agreed to suspend debate over past history and focus on regulatory action that would permit these actions **provided their reliability could be assured**

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## BACKGROUND (continued)

- In March 2003, NRC issued FP Inspection Procedure, Attachment 71111.05, Enclosure 2 – *Inspection Criteria for FP Manual Actions*
  - “For an interim period, while rulemaking is in progress ... acceptance criteria can be developed which would facilitate evaluations of certain manual actions.”

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## BACKGROUND (continued)

- March 2003 inspection criteria were based on NRC inspection experience and addressed the following
  - Diagnostic instrumentation
  - Environmental considerations
  - Staffing and Training
  - Communications and Accessibility
  - Procedures
  - Verification and validation

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## BACKGROUND (continued)

- In June 2003, NRC issued SECY-03-0100, *Rulemaking Plan on Post-Fire Operator Manual Actions*
  - “... [T]here is insufficient evidence that the generic use of these actions poses a safety issue ... that requires prompt action ... [E]nforcement may not be the best remedy ... [because] ... [I]licensees ... might flood the NRC with exemption or deviation requests, which could divert NRC resources ...”

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## BACKGROUND (continued)

- SECY-03-0100 (continued)
  - “... To resolve the regulatory compliance issue, the staff ... has concluded that generic guidance and acceptance criteria for feasible operator manual actions should be developed ... Documenting compliance ... would demonstrate that safety has been maintained and that the operator manual actions do not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.”

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## BACKGROUND (continued)

- SECY-03-0100 (continued)
  - “Even with Commission consent to proceed with rulemaking, licensees using unapproved operator manual actions would be in non-compliance ... Upon receiving Commission approval of the ... rulemaking plan, the staff will develop an interim enforcement policy to allow discretion, ... provided these licensees have documented the feasibility ... in accordance with the staff’s proposed preliminary generic acceptance criteria.”

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## BACKGROUND (continued)

- In September 2003, the Commission issued a Staff Requirements Memorandum (SRM) on SECY-03-0100 approving “the staff’s recommendation to proceed with rulemaking ... to revise the FP program requirements contained in Appendix R of 10 CFR Part 50 and the associated guidance.”

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## BACKGROUND (continued)

- SRM on SECY-03-0100 (continued)
  - “... [T]he Commission has approved the staff’s plan to develop an interim enforcement policy to deal with these compliance issues ... The staff should leverage its past experience to develop the general acceptance criteria and expedite this rulemaking effort.”
    - NRC staff position
      - Use existing March 2003 inspection criteria as basis for interim acceptance criteria

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## BACKGROUND (continued)

- SRM on SECY-03-0100 (continued)
  - “... The interim enforcement policy ... in no way obviates the need for licensees to continue documenting the technical feasibility of their operator manual actions.”
    - NRC staff position
      - Technical acceptability of operator manual actions remains paramount
      - Develop additional criteria as appropriate to assure technical acceptability

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## DEFINITIONS

- Operator manual actions
  - Those actions taken by operators to perform manipulation of components and equipment from outside the main control room (MCR) to achieve and maintain post-fire safe shutdown. These actions are performed locally by operators, typically at the equipment.

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## DEFINITIONS (continued)

- Operator actions
  - Those actions taken by operators from inside the MCR to achieve and maintain post-fire safe shutdown. These actions are typically performed by the operator controlling equipment located remote from the MCR.
- Acceptance criteria apply only to operator manual actions, i.e., ones taken outside the MCR, not operator actions (inside the MCR)

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## ACCEPTANCE CRITERIA

- Available indications
- Environmental considerations
  - Smoke and toxic gases
  - Temperature and humidity conditions
  - Radiation
  - Emergency lighting
  - Local accessibility

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## ACCEPTANCE CRITERIA (cont'd)

- Staffing and Training
- Communications
- Equipment
- Procedures
- Demonstration
- Complexity and number

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## BASES

- Acceptance criteria used in NRC Inspection Manual Chapter 609, *Significance Determination Process*
  - Consistent with Remote Location Manual Actions Evaluation Table in revised FP SDP
- Acceptance criteria from March 2003 NRC FP Inspection Procedure, Attachment 71111.05, Enclosure 2 – *Inspection Criteria for FP Manual Actions*

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## BASES (continued)

- Input from RES-sponsored study by Sandia, JCN W6994 Draft Letter Report, *Risk Insights Related to Post-Fire Operator Manual Actions*
- Feedback from September 2003 meeting with ACRS Sub-committee on FP
- Acceptance criteria correspond to Performance Shaping Factors used in Human Reliability Analysis techniques

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## PATH FORWARD

- Develop final acceptance criteria for operator manual actions considering additional input from
  - Office of Nuclear Regulatory Research
  - Office of Enforcement
  - Advisory Committee on Reactor Safeguards
    - FP Sub-committee
  - External stakeholders
    - Public
    - Industry

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## SCHEDULE

- Interim enforcement discretion
  - *Federal Register Notice* with public comment period, November 2003 through January 2004
  - Commission approval – July 2004
    - Effective 60 days later – September 2004
- Final rulemaking
  - October 2004 through October 2005
    - *Federal Register Notice(s)*, with public comment periods for stakeholder feedback

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