

**From:** Charlie Payne, RTT  
**To:** Charles Casto  
**Date:** 3/12/03 4:30PM  
**Subject:** Fire Protection Manual Operator Actions Slides

As requested, a set of slides is attached (a hard copy is in your in-box). FYI, the three "background" slides and the "allowed manual actions" slide are intended for backup use, as needed. Let me know of any changes you need.

Charlie...

**CC:** Charles R. Ogle

NN-6

**FIRE PROTECTION  
LOCAL MANUAL OPERATOR ACTIONS**

**INSPECTION ISSUE OR BUCKET?**

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Charles A. Casto, Director  
Division of Reactor Safety  
Region II

## Background

- All licensees are committed to 10 CFR 50, Appendix R, Section III.G.
- Section III.G.1 specifies fire protection features capable of limiting fire damage such that control of one train of hot shutdown systems from the main control room is free from fire damage. Systems to achieve cold shutdown must be repairable within 72 hours.
- Section III.G.2 specifies acceptable physical separation criteria for cables and equipment necessary to achieve

## Background

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▪ Three acceptable cable (including associated circuits) and equipment separation methods are provided:

1. separation by a 3-hour rated fire barrier
2. separation by horizontal distance greater than 20 feet with no intervening combustibles and fire detection with automatic suppression in the area

3. enclosure by a 1-hour rated fire barrier with fire detection and automatic suppression in the area

▪ No provision for use of manual actions as alternative to

## Background

- Section III.G.3 provides for alternative or dedicated shutdown capability where the requirements of III.G.2 can not be met or where damage from fire suppression activities could occur. Fire detection and a fixed fire suppression system must be installed in the fire area.
- Manual actions are allowed to comply with Section III.G.3 but the performance criteria of Section III.L, which includes additional procedures, analyses and adequate staffing, also apply.

## Inspection Issue

- **Triennial fire protection inspections under the Reactor Oversight Program found that some licensees relied on manual actions instead of upgrading or replacing deficient Thermo-Lag barriers to comply with III.G.2.**
- **Generally, these changes did not receive NRC staff evaluation or approval.**
- **Using manual actions in lieu of passive fire protection features, without adequate evaluation, could result in a significant increase in risk.**
- **This resulted in unresolved inspection issues until the**

## Inspection Issue

- The NRC regional inspectors requested and received fire protection training on this issue in November 2001. Scope included the licensing basis and the inspection and documentation requirements for manual actions.
- NEI subsequently asked for and received a copy of this lesson plan.
- In January 2002, an NEI letter to the NRC claimed that the training guidance was a new staff position and that manual actions had been previously accepted in NRC



## Backfit?

- Reviewed NUREG-1409, "Backfitting Guidelines," regarding possible tacit approval in inspection reports.
- Evaluating the feasibility of a manual action without reviewing prior licensing approval is an example of not challenging a licensee's practice. This would not constitute tacit approval.
- If a manual action is erroneously accepted in an inspection report as specifically meeting III.G.2 of Appendix R, and a determination is made that action is needed to restore compliance, per NUREG-1409 no backfit analysis would be required.



## Conclusion

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- Appendix R, III:G.2 has no provision for generic use of manual actions in lieu of cable and equipment separation requirements.
- Inspector guidance is a compilation of existing guidance from NRC generic communications and Regulatory Guide 1.189.
- Guidance has not changed. But the inspector's understanding of the guidance and associated regulations has improved.
- Consequently, this is not a backfit situation.

## Allowed Manual Actions

- Operation of equipment for which cables are located in areas compliant with III.G.1
- Manual operation of normally operated manual switches and valves.
- Staff approved deviation and exemptions for manual action in lieu of compliance with III.G.2
- Manual operation of equipment to meet the requirements of III.G.3 (alternative or dedicated shutdown) and the performance requirements of III.L.

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