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**SUPPLEMENTARY INFORMATION:** Nuclear power plant fire protection regulations and associated guidelines prescribe fire protection features to ensure that at least one means of achieving and maintaining safe shutdown conditions will remain available during or after any postulated fire. The NRC has concluded that a fire protection regulatory compliance issue exists at many nuclear power plants. This situation involves fire protection of redundant safe shutdown trains when these trains are located within the same fire area. Regional inspections indicate that rather than using fire barriers or physical separation to maintain safe shutdown capability, many licensees rely on operator manual actions that have not been approved by the NRC. Operator manual actions refer to those actions taken by operators to manipulate components and equipment from outside the main control room to achieve and maintain post-fire safe shutdown. Operator manual actions are not permitted in 10 CFR part 50, appendix R, paragraph III.G.2, for plants licensed to operate before 1979 unless a specific exemption has been granted. For plants licensed to operate after 1979, there is uncertainty as to whether operator manual actions can be used without NRC approval as Appendix R is not required by regulation for those plants (although most plants committed to Appendix R-equivalent guidance in their fire protection programs). It is the NRC's understanding that most of the licensees who rely on unapproved operator manual actions have done so under the belief that the use of operator manual actions to achieve safe shutdown is acceptable, without NRC prior approval, as long as the reliance on operator manual actions does not adversely affect the ability of a plant to achieve and maintain safe shutdown. The industry also believes that most operator manual actions used by licensees for operation of a safe shutdown train during a fire do not involve any safety significant feasibility concerns and would likely be approved by the NRC if processed as an exemption or deviation request. The results from NRC fire protection inspections to date indicate that there is insufficient evidence that the generic use of these manual actions poses a safety concern. Thus the staff believes that use of unapproved manual actions

(for both pre- and post-1979 plants) is typically a compliance issue and is not a significant safety issue.

The Commission has decided to resolve this issue generically through rulemaking because rulemaking provides the most efficient and effective process to align regulatory requirements and safety objectives. In SECY-03-0100, dated June 17, 2003, the staff proposed and on September 12, 2003, the Commission approved developing an interim enforcement policy which would be in effect while the rulemaking was being undertaken to codify final acceptance criteria for operator manual actions. This policy would exercise discretion in that the NRC would refrain from taking enforcement action for those licensees who rely on operator manual actions, provided these licensees have demonstrated and documented the acceptability of their operator manual actions in accordance with interim acceptance criteria developed by the staff. The Commission approved the staff's recommendation to engage stakeholders in at least one public meeting to discuss the interim manual action acceptability criteria and how they would be used in interim enforcement policy. (See Commission Memorandum dated September 12, 2003, ADAMS Accession No. ML032550222).

The NRC staff has developed draft interim acceptance criteria for manual actions. These draft criteria are provided below. They are an extension of the "Inspection Criteria for Fire Protection Manual Actions" issued by the NRC in March 2003 in Inspection Procedure 7111.05. This inspection procedure is available on the NRC public Web site (<http://www.nrc.gov>.) The NRC held a public meeting on November 12, 2003, at NRC headquarters in Rockville, Maryland to allow members of the public to comment on the preliminary draft criteria below. Additional written comments on these criteria may be submitted to the NRC during the 30 day comment period.

During the rulemaking process to codify the final acceptance criteria for manual actions, additional public notices will be issued and additional public comments will be solicited to further ensure that public stakeholder input is considered.

#### **Draft Interim Criteria for Determining the Acceptability of Manual Actions To Achieve Post-Fire Safe Shutdown**

Licensees who have relied on operator manual actions to comply with Paragraph III.G.2 of Appendix R may be allowed enforcement discretion if the area where the fire occurs has fire

detectors and an automatic fire suppression system installed in the fire area and if the manual actions relied upon are consistent with all of the following acceptance criteria<sup>1</sup>:

##### *1. Available Indications*

Diagnostic indication, if credited to support operator manual actions, shall be capable of:

- Confirming that the action is necessary;
- Being unaffected by the postulated fire;
- Providing a means for the operator to detect whether spurious operation of safety-related equipment has occurred; and
- Verifying that the operator manual action accomplished the intended objective.

##### *2. Environmental Considerations*

Environmental conditions encountered while accessing and performing operator manual actions shall be demonstrated to be consistent with the following human factor considerations for visibility and habitability:

- Emergency lighting shall be provided as required in Appendix R, Section III.J, or by the licensee's approved fire protection program, [e.g., lit with 8-hr battery-backed emergency lighting], and sufficient lighting shall be provided for paths to and from locations requiring any actions.
- Radiation shall not exceed 10 CFR Part 20, Section 20.1201, limits.
- Temperature and humidity conditions shall be evaluated to ensure that temperature and humidity do not adversely affect the capability to perform the operator manual action (See, e.g., NUREG/CR-5680, Vol. 2, "The Impact of Environmental Conditions on Human Performance") or the licensee shall provide an acceptable rationale for why temperature/humidity do not adversely affect performing the manual actions.
- Fire effects shall be evaluated to ensure that smoke and toxic gases from the fire do not adversely affect the capability to access the required equipment or to perform the operator manual action.

##### *3. Staffing and Training*

There shall be a sufficient number of plant operators, under all staffing levels, to perform all of the required actions in the times required for a given fire scenario. The use of operators to perform actions shall be independent

<sup>1</sup> The criteria are not listed in any particular order.