

May 16, 2004

The Honorable Edward J. Markey  
United States House of Representatives  
Washington, D.C. 20515

Dear Congressman Markey:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter, dated March 3, 2004, concerning ongoing rulemaking efforts related to the revision of current fire protection requirements, as specified in Section III.G.2 of Appendix R to Title 10, Part 50 of the *Code of Federal Regulations* (10 CFR Part 50). In your letter, you asked specific questions suggesting that this effort weakens safety in the event of a fire at a nuclear facility. The Commission has considered the issues and concerns expressed in your letter and has concluded that the rulemaking should proceed since the proposed rule would not degrade fire safety. Properly analyzed and implemented manual actions can provide an adequate level of protection and safety.

The NRC remains focused on all areas of nuclear safety and recognizes the importance of maintaining safety in the threat environment brought about by the terrorist attacks on September 11, 2001. As a result, the NRC has required licensees to implement significant enhancements to bolster security at the Nation's nuclear power plants. In the area of fire protection, the agency requires each licensee to maintain the ability to shut down the reactor safely in the event of a fire. The primary objectives of the NRC's fire protection rules and regulations are to (1) minimize the potential for fires and explosions; (2) rapidly detect, control, and extinguish fires that do occur; and (3) ensure that fire will not prevent the performance of necessary safe shutdown functions or increase the risk of significant radioactive releases to the environment. In instances where the regulations can be improved to ensure a more consistent and clear understanding of the requirements or revised to add an alternative means of ensuring adequate protection of the public's health and safety, the Commission makes such changes as deemed appropriate.

In SECY 03-0100, "Rulemaking Plan on Post-Fire Operator Manual Actions" [ADAMS Accession No. ML023180599], the NRC staff proposed a plan to revise the fire protection regulations to give licensees the option to use certain manual actions as additional means of achieving and maintaining safe reactor shutdown from outside the control room in the event of a fire. Through the review of existing regulatory exemptions, deviations, and violations, the NRC concluded that operator manual actions to shut down a reactor from the control room could be acceptable in satisfying the requirements of Section III.G.2. The key is that the necessary manual actions must be reliably performed with existing personnel and resources without presenting a significant hazard to the personnel involved. Consequently, the NRC staff has developed a proposed set of interim acceptance criteria for the manual actions of plant operators. These acceptance criteria would require licensees to ensure that the environment is

safe for the individual performing the action; demonstrate that the manual action would achieve its intended function; and be performed by a qualified individual in a timely manner to ensure the ability to achieve and maintain safe reactor shutdown. The NRC believes that these interim acceptance criteria are appropriate.

Following Commission approval of the proposed plan described in SECY 03-0100 on September 12, 2003, the NRC staff began efforts to further develop the technical bases for the III.G.2 manual action acceptance criteria and regulatory guidance. Using those technical bases, the NRC intends to issue interim acceptance criteria and a related enforcement policy to govern the treatment of III.G.2 manual actions until the final rule is approved and issued. Toward that end, the NRC issued the draft interim acceptance criteria for comment during a public meeting on November 12, 2003. During that meeting, nuclear industry stakeholders and members of the public asked the NRC to provide an additional opportunity to comment on the interim criteria. In response, the NRC agreed to publish the interim acceptance criteria in the *Federal Register* and allow a 30-day public comment period. The *Federal Register* notice containing the criteria discussed at the meeting was published on November 26, 2003 (68 FR 66501), with the 30-day comment period ending on December 26, 2003. When several public commenters requested additional time to review the interim acceptance criteria, the NRC published a subsequent notice on December 15, 2003 (68 FR 69730), to extend the comment period for an additional 30 days, until January 26, 2004.

While the form and content of the rule have not yet been made final, the NRC anticipates that the acceptance criteria will be issued in late summer of 2004. Once the acceptance criteria are issued, NRC inspectors will use them to review III.G.2 manual actions until the final rule is approved and issued. The proposed rule is scheduled to be published early in 2005, subject to approval of the Commission. The NRC will provide a 75-day public comment period for the proposed rule language. The NRC will then review and analyze the received public comments and make appropriate changes prior to the issuance of the final rule.

The enclosures to this letter provide relevant information and more detailed answers to the specific questions in your letter dated March 3, 2004. If you have further questions, please feel free to contact me.

Sincerely,

/RA/

Nils J. Diaz

Enclosures:

1. Background Information on the Use of Operator Manual Actions
2. NRC Responses to Questions on Manual Actions of Plant Operators
3. 1998 Thermo-Lag 330-1 Confirmatory Orders Related to Fire Protection
4. CD with Related Correspondence

cc w/o enclosures: See next page

cc w/o enclosures:

The Honorable Joe Barton, Chairman  
Committee on Energy and Commerce

The Honorable Ralph Hall, Chairman  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce

The Honorable Rick Boucher, Ranking Member  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce

May 16, 2004

The Honorable John D. Dingell, Ranking Member  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515

Dear Congressman Dingell:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter, dated March 3, 2004, concerning ongoing rulemaking efforts related to the revision of current fire protection requirements, as specified in Section III.G.2 of Appendix R to Title 10, Part 50 of the *Code of Federal Regulations* (10 CFR Part 50). In your letter, you asked specific questions suggesting that this effort weakens safety in the event of a fire at a nuclear facility. The Commission has considered the issues and concerns expressed in your letter and has concluded that the rulemaking should proceed since the proposed rule would not degrade fire safety. Properly analyzed and implemented manual actions can provide an adequate level of protection and safety.

The NRC remains focused on all areas of nuclear safety and recognizes the importance of maintaining safety in the threat environment brought about by the terrorist attacks on September 11, 2001. As a result, the NRC has required licensees to implement significant enhancements to bolster security at the Nation's nuclear power plants. In the area of fire protection, the agency requires each licensee to maintain the ability to shut down the reactor safely in the event of a fire. The primary objectives of the NRC's fire protection rules and regulations are to (1) minimize the potential for fires and explosions; (2) rapidly detect, control, and extinguish fires that do occur; and (3) ensure that fire will not prevent the performance of necessary safe shutdown functions or increase the risk of significant radioactive releases to the environment. In instances where the regulations can be improved to ensure a more consistent and clear understanding of the requirements or revised to add an alternative means of ensuring adequate protection of the public's health and safety, the Commission makes such changes as deemed appropriate.

In SECY 03-0100, "Rulemaking Plan on Post-Fire Operator Manual Actions" [ADAMS Accession No. ML023180599], the NRC staff proposed a plan to revise the fire protection regulations to give licensees the option to use certain manual actions as additional means of achieving and maintaining safe reactor shutdown from outside the control room in the event of a fire. Through the review of existing regulatory exemptions, deviations, and violations, the NRC concluded that operator manual actions to shut down a reactor from the control room could be acceptable in satisfying the requirements of Section III.G.2. The key is that the necessary manual actions must be reliably performed with existing personnel and resources without presenting a significant hazard to the personnel involved. Consequently, the NRC staff has developed a proposed set of interim acceptance criteria for the manual actions of plant operators. These acceptance criteria would require licensees to ensure that the environment is

safe for the individual performing the action; demonstrate that the manual action would achieve its intended function; and be performed by a qualified individual in a timely manner to ensure the ability to achieve and maintain safe reactor shutdown. The NRC believes that these interim acceptance criteria are appropriate.

Following Commission approval of the proposed plan described in SECY 03-0100 on September 12, 2003, the NRC staff began efforts to further develop the technical bases for the III.G.2 manual action acceptance criteria and regulatory guidance. Using those technical bases, the NRC intends to issue interim acceptance criteria and a related enforcement policy to govern the treatment of III.G.2 manual actions until the final rule is approved and issued. Toward that end, the NRC issued the draft interim acceptance criteria for comment during a public meeting on November 12, 2003. During that meeting, nuclear industry stakeholders and members of the public asked the NRC to provide an additional opportunity to comment on the interim criteria. In response, the NRC agreed to publish the interim acceptance criteria in the *Federal Register* and allow a 30-day public comment period. The *Federal Register* notice containing the criteria discussed at the meeting was published on November 26, 2003 (68 FR 66501), with the 30-day comment period ending on December 26, 2003. When several public commenters requested additional time to review the interim acceptance criteria, the NRC published a subsequent notice on December 15, 2003 (68 FR 69730), to extend the comment period for an additional 30 days, until January 26, 2004.

While the form and content of the rule have not yet been made final, the NRC anticipates that the acceptance criteria will be issued in late summer of 2004. Once the acceptance criteria are issued, NRC inspectors will use them to review III.G.2 manual actions until the final rule is approved and issued. The proposed rule is scheduled to be published early in 2005, subject to approval of the Commission. The NRC will provide a 75-day public comment period for the proposed rule language. The NRC will then review and analyze the received public comments and make appropriate changes prior to the issuance of the final rule.

The enclosures to this letter provide relevant information and more detailed answers to the specific questions in your letter dated March 3, 2004. If you have further questions, please feel free to contact me.

Sincerely,

/RA/

Nils J. Diaz

Enclosures:

1. Background Information on the Use of Operator Manual Actions
2. NRC Responses to Questions on Manual Actions of Plant Operators
3. 1998 Thermo-Lag 330-1 Confirmatory Orders Related to Fire Protection
4. CD with Related Correspondence

cc w/o enclosures: See next page

cc w/o enclosures:

The Honorable Joe Barton, Chairman  
Committee on Energy and Commerce

The Honorable Ralph Hall, Chairman  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce

The Honorable Rick Boucher, Ranking Member  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce

## **BACKGROUND INFORMATION ON THE USE OF OPERATOR MANUAL ACTIONS**

In 1975, a significant fire occurred at the Browns Ferry Nuclear Power Plant. In that event, a plant employee using a candle flame as a leak-testing device inadvertently set fire to polyurethane sheeting used to seal around electrical cables. The fire spread to electrical cables in several nearby cable trays that provided control, instrumentation, and power for redundant trains of equipment necessary for safe shutdown.

As a result of the fire, the U.S. Nuclear Regulatory Commission (NRC) determined that licensees should employ a suitable combination of electrical isolation, physical distance, fire barriers, and sprinkler systems to maintain the independence of redundant safety equipment. Based on that determination, the NRC staff included this concept of independence in its ongoing rulemaking related to Appendix R to Title 10, Part 50, of the *Code of Federal Regulations* (10 CFR Part 50). However, because the rule was to apply to facilities that, in most cases, were already built, the NRC recognized that compliance with the strict, prescriptive requirements of Appendix R might be very difficult for some facilities. Consequently, for plants that were built before 1979, the NRC backfitted the provisions in Sections III.G, III.J, and III.O of Appendix R. The NRC included a provision that allowed licensees to submit alternative acceptable methods for protecting redundant equipment for NRC review and approval under the exemption process. During the initial backfit, the NRC approved a large number of plant-specific exemptions to all three sections at approximately 60 nuclear power plants.

After the rule was issued, Connecticut Light and Power Company (CLP), a nuclear plant licensee, challenged the rule in the U.S. Court of Appeals for the D.C. Circuit. Specifically, CLP argued a number of issues before the Court, one of which was its contention that the NRC failed to offer an adequate technical justification for the fire protection rules that were adopted. The company also argued that, in the rulemaking record, the NRC had not demonstrated that complying with one of the methods set forth in Section III.G.2 was the *only* way to ensure the safety of a facility. Moreover, CLP asserted that other adequate methods existed, but were not permitted by the rule. The Court found that “[i]n light of the fact that the exemption procedure will allow power plants to show that alternative measures provide equivalent safety protection, we find that the record provides sufficient support for that aspect of the fire protection program applying to safe shutdown.... The exemption procedure, however, indicates that the Commission did not intend to limit protective measures to the three methods stipulated in the rule....” The Court further indicated that the built-in exemption provision added a “critical element of flexibility,” because it allowed licensees having other acceptable fire protection methods to submit plant-specific exemptions for NRC review and approval (*Connecticut Light and Power Co. v. NRC*, 673 F.2d 525 (D.C. Cir. 1982)).

In the early 1990s, the NRC and the nuclear industry identified the generic problems with Thermo-lag fire protective barriers. Routine fire protection inspections continued over the next several years. In 2000, however, the NRC’s fire protection inspectors began to identify that a number of licensees had either not upgraded or replaced the existing fire barrier material, or provided less than the required separation distance between redundant safety trains used to satisfy the Section III.G.2 criteria. Instead, these licensees were relying upon operator manual actions. Because Section III.G.2 of Appendix R does not identify manual actions as an acceptable alternative, an exemption is necessary in order for the NRC to determine whether a licensee’s proposed use of manual actions for the purposes of Section III.G.2 provides

reasonable assurance of adequate protection of the public's health and safety. The NRC, therefore, updated Inspection Procedure (IP) 71111.05, "Fire Protection," and addressed the issue in training for fire protection inspectors, which the agency conducted on November 14, 2001. As a follow-up, in 2002, NRC officials met with industry representatives and informed them that the use of manual actions without prior approval by the NRC would not be in compliance with Section III.G.2. During a subsequent meeting on June 20, 2002, Nuclear Energy Institute (NEI) informed the NRC that there was widespread use of operator manual actions throughout the industry, based on the industry's understanding of past practice and existing guidance. The industry also stated that licensees' use of unapproved manual actions had become prevalent even before the Thermo-lag concerns arose. In order to address the safety significance of unapproved manual actions resulting from the perceived lack of clarity in the regulatory requirements, the NRC developed criteria for the agency's inspectors, and issued those criteria in the revision to IP 71111.05 in March 2003.

The NRC subsequently began to evaluate allowing operator manual actions without prior NRC approval, as an additional option for licensees to achieve and maintain safe reactor shutdown in the event of a fire, as required by Section III.G.2. The NRC developed appropriate acceptance criteria for operator actions that maintain safety. The staff also developed a rulemaking plan to revise Section III.G.2 to allow licensees to implement acceptable operator manual actions after demonstrating and documenting that they meet the regulatory acceptance criteria. The staff conveyed this plan to the Commission on June 17, 2003 (SECY 03-0100), and the Commission approved the rulemaking plan on September 12, 2003.

Since the unapproved manual actions that meet the acceptance criteria for Section III.G.2 are expected to be safe and reliable fire protection alternatives, the NRC began to develop an interim enforcement policy to be in effect until the final rule is issued. Under this interim policy, the NRC will refrain from taking enforcement action for violations associated with a licensee's unapproved use of operator manual actions, provided that the specific manual actions comply with the interim acceptance criteria included in the policy. However, the NRC may take enforcement action when the manual actions do not comply with the interim acceptance criteria.

In a public meeting on October 17, 2003, the NRC initiated public discussion of the interim enforcement policy and associated draft interim acceptance criteria for operator manual actions. On November 12, 2003, the NRC held another public meeting to solicit stakeholder comments on the draft criteria. Representatives from the Union of Concerned Scientists, the Nuclear Information and Resource Service, and Greenpeace were specifically invited to attend. During this meeting, both nuclear industry stakeholders and members of the public requested that the NRC allow a written comment period. In response to these requests, a *Federal Register* notice (68 FR 66501) containing the criteria was published on November 26, 2003, with a 30-day comment period ending on December 26, 2003. The NRC subsequently received numerous email requests from members of the public, stating that they needed additional time to comment on the draft criteria for the interim enforcement policy. It became clear that the NRC should extend the comment period. Accordingly, on December 15, 2003, the NRC published a notice (68 FR 69730) extending the comment period for another 30 days until January 26, 2004. The NRC has evaluated the public comments and is now refining the interim enforcement policy in parallel with preparing the proposed rule.



## **NRC RESPONSES TO QUESTIONS ON MANUAL ACTIONS OF PLANT OPERATORS**

### **Questions on Fire Safety**

Question 1: SECY 03-0100 states that “there is insufficient evidence that the generic use of these [Operator Manual] actions poses a safety issue.”

- a. What would constitute evidence that the generic use of these actions poses a safety issue? Would another Browns Ferry fire or an incident on the scale of a Three Mile Island accident be needed to prompt action by the Commission?

Answer:

The NRC conducts inspections of the operator manual actions as part of the Reactor Oversight Process to identify and ensure that licensees address safety-significant issues that are potential precursors to significant performance deficiencies before they result in major events such as the fire at the Browns Ferry Nuclear Power Plant in 1975. The NRC also inspects licensees’ methodologies for achieving and maintaining hot shutdown conditions in accordance with the requirements set forth in Section III.G.2 of Appendix R to Title 10, Part 50, of the *Code of Federal Regulations* (10 CFR Part 50). In the course of those inspections, the NRC generally evaluates procedural adequacy, training, individual qualifications, environmental conditions, and timeliness of manual actions to provide reasonable assurance that they will perform the intended function. If a licensee cannot demonstrate the feasibility of a manual action, the NRC addresses the issue through the Reactor Oversight Process.

- b. What is the Commission doing to obtain evidence of whether or not the generic use of such operator manual action poses a safety issue?

Answer:

As previously mentioned, the NRC regularly inspects licensees’ methodologies for achieving and maintaining the safe shutdown of the reactor in the event of a fire. In the event that inspections reveal safety-significant issues associated with manual actions that would not achieve their intended functions, the specific issues are documented, trended, and appropriate actions are taken.

- c. Doesn't relying on a reactor employee taking the time to manually shut down the reactor in the middle of a fire caused by a terrorist attack or catastrophic accident at a minimum pose a safety risk to that individual employee? Doesn't that also pose a safety issue for the Commission?

Answer:

A reactor operator's responsibilities to take manual actions outside the control room may or may not involve exposure to the effects of a fire and/or a security event, depending upon the location in the plant where the reactor operator needs to perform the manual action (relative to the location of the fire or event), and the ingress/egress path to that location. The NRC's proposed criteria for acceptability of operator manual actions requires a licensee relying upon manual actions to ensure the health and safety of the individuals performing those manual actions as part of a safe-shutdown response associated with a fire.

Question 2: SECY 03-0100 states that the "proposed rulemaking would endorse the practice of using acceptable Operator Manual Actions as a substitute for fire barriers. This is a significant policy change, in that NRC has previously preferred the use of physical fire barriers over the use of Operator Manual Actions, given the choice."

- a. In the aftermath of the Browns Ferry fire and the subsequent promulgation of the agency's fire protection regulations, including 10 CFR 50 [Title 10 of the Code of Federal Regulations, Part 50] Appendix R, III.G.2, why did NRC require the use of physical barriers, automated fire detection and suppression systems, and a minimal separation distance instead of Operator Manual Actions?

Answer:

The rulemaking following the Browns Ferry fire focused on physical barriers, automated fire detection and suppression systems, and a minimum separation distance, which are still important elements of ensuring that licensees maintain the "defense-in-depth" concept for the fire protection program. As indicated in the Statement of Consideration (SOC) for Appendix R [45 FR 76602 published November 19, 1980], the NRC amended its regulations to resolve certain contested generic issues in fire protection safety evaluation reports. At the time, the operator manual actions topic was not identified as a generic issue. Appendix R was intended to address only a portion of the specific items contained in Appendix A to Branch Technical Position 9.5-1 (BTP 9.5-1), which is the basic fire protection guidance used by the NRC to review the adequacy of fire protection programs. The SOC also stated that BTP 9.5-1 originally permitted a combination of fire retardant coatings along with fire detection and suppression systems without specifying a physical separation requirement to protect redundant systems. The Commission believed that licensees should reexamine those previously approved configurations of fire protection that did not meet the requirements of Section III.G and apply for an exemption if justifiable.

- b. Has NRC changed its analysis of fire and fire protection systems for post-fire safe-shutdown regulation? If so, why? If not, then why isn't the Commission maintaining its preference for fire barriers, automated fire detection and suppression systems, and a minimal separation distance?

Answer:

The NRC has not changed its approach to analysis and evaluation of fire and fire protection systems for post-fire safe shutdown. Since 1975, the NRC has maintained flexibility with regard to the combinations of fire protection measures that licensees propose in their exemption requests. The NRC has approved exemptions from the requirements of Section III.G.2, provided that the licensees could demonstrate that the proposed combinations ensure an adequate level of safety. In 2002, the NRC considered external stakeholder input, reviewed various findings identified since the inception of the Reactor Oversight Process (as they relate to Section III.G.2), and examined previously approved exemptions. Based on those considerations, the NRC determined that those manual actions that can be demonstrated to be reliably accomplished to achieve and maintain the safe shutdown of the reactor do provide an adequate level of safety and, as a result, initiated actions to revise Section III.G.2.

- c. With the publication of the *Federal Register* notice dated November 26, 2003 (68 FR 66501-03), "Draft Criteria for Determining Feasibility of Manual Actions to Achieve Post-Fire Safe Shutdown" [pages 66501–66503], why did NRC, despite repeated objections from the members of its Advisory Committee on Reactor Safeguards (ACRS), Subcommittee on Fire Protection, use the term "feasible" for qualifying and validating these manual actions? [See Official Transcript of ACRS Subcommittee on Fire Protection, September 9, 2003.]

Answer:

The ACRS expressed a concern that the use of a "feasible" criterion did not ensure that the proposed manual action could routinely be achieved. The concept of reliability of these actions (repeatability of their successful accomplishment by different crews under different fire scenarios) was always implied in the NRC's use of the term "feasible" in the proposed criteria. To ensure clear communication of the NRC's expectations regarding adequate protection of public health and safety, the staff will consider the terms "feasible and reliable" in the language of the rule as rulemaking activities proceed.

- d. As indicated by the ACRS Subcommittee on Fire Protection concerns, does NRC acknowledge that there is a significant difference in achieving reasonable assurance for post-fire safe shutdown and the safety of both station personnel and the public to be gained through maintaining independently tested, qualified, and inspected fire barriers, fire detection and suppression systems, and minimum separation requirements over “feasible” operator manual actions? If not, please explain why.

Answer:

Yes, it may in fact be more difficult for a licensee to achieve “reasonable assurance” using manual actions in lieu of passive barriers. The NRC requires licensees to achieve and maintain a reasonable level of safety. However, the NRC gives licensees some degree of latitude in how to achieve that level of safety.

Question 3: According to SECY 03-0100, the National Fire Protection Association standard (NFPA-805) states that fire risks may be increased where Operator Manual Actions are relied on to provide the primary means of recovery in lieu of fire protection features.

- a. In light of this standard, why is the Commission choosing to allow licensees to rely upon Operator Manual Actions in the event of a fire at a reactor, rather than requiring its licensees to comply with fire protection regulations?

Answer:

As indicated in SECY 03-0100, the risk may increase when operator manual actions are used in lieu of other fire protection methods. However, the current regulations and the associated exemption process, which was recognized by the Court of Appeals decision, allow licensees to use operator manual actions after receiving approval from the NRC. The NRC notes that NFPA 805 does **not** prohibit the use of manual actions. Rather, NFPA 805 requires licensees to consider the risks associated with manual actions. The rulemaking incorporates criteria to ensure that any risk increases are minimal and that the plants remain safe. The Commission has approved a final rule that endorses the use of NFPA 805 as an alternative to current fire protection requirements, including those set forth in Section III.G.2.

- b. SECY 03-0100 states that the NRC Office of Research “will conduct a literature search and evaluation of the currently available information and industry practices to formulate the technical bases for manual actions.” Please provide copies of all such information found, as well as any NRC analyses of it.

Answer:

The enclosed CD-ROM contains the transmittal memo, report, and some of the associated references provided by the Office of Research. As stated in the report, the staff based its findings on reviews of selected individual plant examinations of external events (IPEEEs), fire-related probabilistic risk assessments (PRAs), and the IPEEE summary report

(NUREG-1742 [Ref. 1]), as well as previous reviews of fire-related operational events identifying important factors that influence human performance in fires [e.g., Refs. 2–4], and lessons learned from developing human reliability analysis criteria for use in the ongoing collaborative fire PRA requantification studies being conducted by the NRC and the Electric Power Research Institute (EPRI).

Question 4: On March 3, 1993, then-NRC Chairman Selin stated in testimony before Congress (see “Fire Safety At Nuclear Power Stations,” Hearing Before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, House of Representatives, 103<sup>rd</sup> Congress, March 3, 1993) that “the NRC’s fundamental regulatory requirement, namely 1 hour of protection with detection and suppression or 3 hours without detection or suppression, has not changed.” Yet the NRC, faced with widespread noncompliance with this requirement, is now proposing not to enforce the requirement more vigorously but instead to make compliance to the requirement of operable fire barriers, suppression and detection, and cable separation voluntary by adding the Operator Manual Actions option.

- a. Why hasn’t the Commission enforced compliance with the regulations as described by then-Chairman Selin? Do you agree that the NRC’s failure to do so sends a signal to the industry that it is acceptable to ignore any regulation it does not want to comply with? If not, why not?

Answer:

Then-Chairman Selin appeared at this Congressional Hearing to address issues related to Thermo-Lag 330-1. Before March of 1993 ended, the NRC had already issued Generic Letter 92-08 (GL 92-08), “Thermo-Lag 330-1 Fire Barriers.” GL 92-08 requested nuclear plant licensees to provide information regarding the use of Thermo-Lag including the adequacy and extent of installation, the licensee’s reliance on the material to satisfy existing fire protection requirements, and any corrective actions to address deficiencies identified as a result of the review. The responses were reviewed by the NRC and requests for additional information were issued. When the NRC noted that some licensees were not making adequate progress towards correcting identified deficiencies, the NRC issued confirmatory Orders to several licensees. The licensees responded that all actions needed to address deficiencies or nonconformance associated with Thermo-Lag 330-1 had been addressed.

In a public meeting held in 2002, licensees stated that the NRC had tacitly approved manual actions without approving exemptions and that subsequently many licensees had implemented operator manual actions unilaterally for fire areas regulated by Section III.G.2. The NRC chose to pursue rulemaking in lieu of evaluating numerous backfit claims or exemption requests to permit reliance on feasible and reliable operator manual actions without prior NRC review and approval. NRC has and will continue to enforce compliance with the regulations. An interim enforcement policy is to be developed, with the intent for this policy to be in effect until a final rule is promulgated. Under this interim policy, the NRC will refrain from taking enforcement action for violations associated with unapproved uses of operator manual actions, provided that the selected manual actions comply with the interim acceptance criteria included in the policy. If the Commission approves the interim enforcement policy, these issues would not be subject to enforcement action. By contrast, these actions would be subject to enforcement action if the Commission does not approve the interim enforcement policy. In

either case, the NRC may take enforcement action when the selected manual actions are not reasonably accomplishable and, therefore, may not lead to providing reasonable assurance of a safe plant condition. In such instances, the preliminary finding will be identified as potentially greater than Green, entered into the Significance Determination Process, and considered for significant (i.e., escalated) enforcement action.

- b. Please provide copies of all safety analyses that have been conducted by NRC staff or other entities that conclude that the use of Operator Manual Actions in lieu of the current fire protection requirements will not decrease safety. If no such analyses have been performed, then on what basis has the Commission justified the proposed rule change?

Answer:

No specific analyses were conducted as part of the NRC's development of the rulemaking plan and the draft interim enforcement policy as a basis for concluding "that the use of operator manual actions in lieu of the current fire protection requirements will not decrease safety." Rather, the NRC staff has routinely inspected operator manual actions using the interim inspection criteria that are currently being used to assess compliance with Section III.G.3 of Appendix R (Alternative Shutdown). These inspections have verified and documented that certain manual actions can be accomplished when performing alternative shutdown procedures. On the basis of years of inspection experience and documentation, the NRC concluded that certain manual actions that meet the current acceptance criteria are capable of providing adequate protection. In addition, the NRC has reviewed and granted certain exemption requests for the use of manual actions in lieu of the separation criteria set forth in Section III.G.2. This experience demonstrates that properly analyzed and implemented manual actions can provide an adequate level of assurance that a nuclear power plant can achieve and maintain hot shutdown conditions.

Question 5: SECY 03-0100 states that "the safety benefit of forcing licensees to upgrade the physical fire barrier separation, where unapproved operator manual actions are currently utilized, is judged not to be significant when compared to the expected costs and resource diversions discussed in the disadvantages above."

- a. On what basis is it appropriate for the NRC to compare safety benefits in a nuclear environment with the costs of achieving them?

Answer:

10 CFR 50.109, "Backfitting," contains the circumstances under which the NRC compares safety benefits "in a nuclear environment." As delineated in 10 CFR 50.109(a)(3), "...the Commission shall require the backfitting of a facility only when it determines, based on the analysis... that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that *the direct and indirect costs of implementation for that facility are justified in view of this increased protection* (emphasis added)." Nonetheless, 10 CFR 50.109(a)(4)(i) specifies that backfit analysis and consideration of costs are not required when the Commission finds that a modification is necessary to bring a facility into compliance with the rules or orders of the Commission, a license, or written commitments by the licensee.

- b. Please provide your analysis regarding the “insignificance” of the safety risks associated with weakening the fire safety regulations.

Answer:

The proposed rule does not weaken the fire safety regulations. The current regulations and the exemption process allow operator manual actions, provided that those actions are approved by the NRC. Over the years, the NRC has inspected manual actions for compliance with Section III.G.3 and documented in inspection reports that certain manual actions can be accomplished when performing alternative shutdown procedures. Since 2001, the NRC’s fire protection inspections have focused on procedures for shutting down the reactor in the event of a fire in risk-significant areas. On the basis of years of inspection experience, findings, and documentation, the NRC has concluded that certain manual actions can be accomplished and provide an adequate safety margin to satisfy the underlying purpose of the fire protection rule for the areas set forth in Section III.G.2. In addition, the NRC has reviewed and granted certain exemption requests for the use of manual actions in lieu of the separation criteria of Section III.G.2. This experience demonstrates that properly analyzed and implemented manual actions provide an adequate level of assurance that a nuclear power plant could achieve and maintain hot shutdown conditions. The change in the regulation codifies the basis for the existing NRC practice of approving exemptions for properly analyzed, demonstrated, and implemented manual actions, and eliminates the need for NRC review and approval. We believe that codifying this alternative in the rule will be more efficient than using the exemption process, and will provide for enhanced safety by allowing resources to be focused on safety rather than administrative compliance.

- c. Has NRC conducted any independent analysis of the costs of compliance with the fire safety regulations, or is it relying on the representations of reactor licensees? Please provide copies of any such analysis prepared by the NRC or any other entity.

Answer:

The NRC has not prepared any independent analyses and is not aware of any such analyses prepared by other entities. Since the issue pertains to compliance with an existing regulation, per 10 CFR 50.109(a)(4)(i), cost is not a consideration. The purpose of the rulemaking is to provide a regulatory process for allowing licensees to comply with Section III.G.2 by demonstrating acceptability of manual actions against a set of acceptance criteria, rather than using the exemption process.

Question 6: Has the NRC undertaken any analysis of the cost of upgrading the fire barriers in comparison to the expected costs and resource diversions that would result in the event of another Browns Ferry-like fire? If not, why not?

Answer:

The NRC has not undertaken an analysis of the cost of upgrading fire barriers in comparison with the costs and resource diversions that would result from a Browns Ferry-like fire. However, the agency is conducting cost-benefit analyses related to NFPA 805 and the manual action rulemaking. Following the Browns Ferry fire, the NRC promulgated

10 CFR 50.48 and Appendix R to 10 CFR Part 50 to enhance fire safety. The provisions of these requirements resulted in the expenditure of significant resources by the NRC and the industry. Beginning in the 1980s, the NRC also performed team inspections, which resulted in a number of escalated enforcement actions. Based on these provisions and the rulemaking incorporating NFPA 805, the NRC believes that no additional cost analysis is required.

Question 7: In November 26, 2003, *Federal Register* Notice, the NRC states “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.” However, a November 14, 2001, NRC presentation entitled “The Use of Manual Operator Actions for Achieving and Maintaining Fire Safe Shutdown,” appears to find otherwise. It states that “Recent inspection have found that some licensees have taken manual actions to the extreme interpretation such that no wrap is provided with operators solely relying on responding to mal-operations after they occur in III.G.2 fire areas. This condition is similar to the condition Browns Ferry was in prior to the 1975 [sic].”

- a. Does the NRC now believe that the pre-1975 condition of the Browns Ferry reactor did not pose a safety concern?

Answer:

The NRC believes that the pre-1975 conditions at Browns Ferry did pose a safety concern. The quote from the NRC presentation regarding Browns Ferry was used for inspector training and was meant to emphasize the importance of reviewing manual actions. The quote was not meant to literally imply the existence of pre-1975 Browns Ferry like conditions.

- b. If not, then why is NRC now proposing to allow licensees to utilize Operator Manual Actions that could recreate this condition instead of enforcing NRC’s current fire protection regulations?

Answer:

The NRC disagrees with the characterization that the proposed rulemaking would constitute a full or partial return to pre-Browns Ferry conditions with respect to fire protection. The Browns Ferry fire occurred in the cable spreading room. In addition, Browns Ferry had to rely on the operators to recognize and respond to transients resulting from fire damage. In many cases, the indications required to do so were damaged. The operators lacked procedures, training, and proper preparation for response to a fire in this area. The rulemaking being considered by the Commission would not affect any of the fundamental requirements or any procedures, training, and preparations that were adopted after the Browns Ferry fire. Rather, the rulemaking would specify an additional method of providing fire protection (i.e., manual actions) **only if** technical criteria to be delineated in the rule are met.



- c. Does the Commission believe that U.S. nuclear power plants are currently more fire-safe than they were in 1975? If so, what regulations or procedures are responsible for this?

Answer:

Yes, the NRC believes that significant improvements have been made to ensure that U.S. nuclear power plants are currently more fire-safe than they were in 1975. These improvements are the result of NRC actions as well as industry activities. The primary regulation for fire protection, 10 CFR 50.48, requires each operating nuclear power plant to have a fire protection plan that satisfies Criterion 3 of Appendix A to 10 CFR Part 50. The NRC has also issued Appendix R to 10 CFR Part 50 and Section 9.5-1, "Fire Protection Program," of the agency's Standard Review Plan (NUREG-0800). In addition, the NRC reviewed licensee programs implementing this guidance, and incorporated the requirements into the operating license for each plant as a license condition. Additionally, the NRC has conducted numerous fire protection inspections at each nuclear power plant. Our efforts in the area of fire protection continue as discussed in answers to previous questions.

Question 8: It is our understanding that, in some cases, reactor operators are designating untrained personnel such as members of the security guard forces as individuals who would be responsible for manually shutting the reactor down in the event of a fire.

- a. Does the Commission support the use of personnel not trained in the operation of a nuclear reactor for this purpose? If so, why?

Answer:

The Commission's regulations prohibit the use of untrained personnel to operate nuclear reactors. Only individuals who have been trained and licensed by the NRC in accordance with 10 CFR 55.3, and 10 CFR 50.54(I), may have the responsibility for shutting down the reactor (i.e., changing its power level).

- b. Should the security guard forces be doing anything other than defending the reactor during a terrorist attack? If not, do you believe that relying on security guard forces to shut down the reactor manually would be ill-advised, since a fire at a reactor could be caused by a terrorist attack?

Answer:

The NRC regulations on security (10 CFR Part 73) for physical plant and materials protection require licensees to meet the minimum security guard staffing requirements, as outlined in the licensees' NRC-approved security plans, at all times. Licensees may not rely on security guard forces to shut down the reactor (i.e., change its power level). If licensees use security guards for duties other than security, such as manual fire fighting, they are required to do so without violating the current regulations and orders regarding physical plant and materials protection (10 CFR Part 73) and fire protection (10 CFR 50.48 and Appendix R to 10 CFR Part 50). The NRC would not expect licensees to rely on security guard forces to fight fires during a terrorist attack.

- c. Has the NRC or its staff undertaken any analysis of the security implications of having licensee guard forces undertake the additional mission of manually shutting down a reactor in the event of fire, including an analysis of scenarios involving a terrorist attack involving acts of arson, a terrorist attack in which an insider set fires to sow confusion, destroy or disable safety systems, or otherwise facilitate the success of the attack? If not, why not? If so, what findings and recommendations were made?

Answer:

The NRC has not undertaken an analysis of the security implications of having licensee guard forces undertake the additional mission of manually shutting down a reactor in the event of fire. The NRC requirements set forth in 10 CFR Part 73 and various Orders define the scope of response expected of members of the security force. As previously indicated, only individuals who have been trained and licensed by the NRC in accordance with 10 CFR 55.3, and 10 CFR 50.54(l), may have the responsibility for shutting down the reactor (i.e., changing its power level). Nonetheless, the NRC is actively reviewing the security-safety interface to ensure that actions in one area do not adversely affect the other.

### **Questions on Enforcing NRC Regulations**

Question 1: It is our understanding that, in 1998, the NRC issued Orders to all reactor operators who had not completed their Thermo-lag 330-1 corrective action programs. A partial list of these reactors is included as Attachment 2. Please provide copies of all such Orders, as well as the status of each reactor operator's compliance with them (and the date on which the licensee came into compliance).

Answer:

During the 1990s, NRC officials met with nuclear power plant licensees to discuss their plans and schedules for implementing the corrective actions presented in Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers." The NRC became concerned about licensees completing their commitments when a number of licensees reported that they had passed their completion dates. In 1998, the NRC sent a letter to each licensee informing them of the NRC's intent to incorporate their commitments into a Confirmatory Order modifying their license(s). Once the NRC received and reviewed the licensee's responses, the agency issued Confirmatory Orders, including the licensee's implementation schedules, to each plant listed in Enclosure 3. The Orders required each licensee to submit a completion letter after completing all corrective actions. The NRC subsequently received letters indicating completion of the ordered Thermo-lag corrective actions by all facilities to which the agency had issued Confirmatory Orders. The NRC then reviewed each licensee's response and resolved outstanding issues with the licensee. In addition, NRC inspection teams randomly verified the adequacy of licensees' field installations. The NRC anticipates that any safety-significant deviations from licensees' corrective action commitments would be identified during the ongoing inspections conducted under the Reactor Oversight Process.

Enclosure 3 also includes the dates and locations (ADAMS Accession Number) of the signed "consent" letters, Confirmatory Orders, and completion letters; electronic copies are provided on the accompanying CD-ROM.

Question 2: SECY 03-0100 states that many licensees are out of compliance with NRC regulations, but that “enforcement may not be the best remedy for this situation” and that enforcement “creates a prospect of significant resource expenditure without clear safety benefits.”

- a. What would be the “resource expenditure” of a single high profile enforcement case against an operator who was issued an Order in 1998 but failed to take any steps to comply with the Order?

Answer:

If the NRC chose to pursue enforcement, as opposed to the rulemaking, most licensees would have requested exemptions, rather than constructing passive barriers or increasing the separation between cable trains. Based on past experience, the intended manual actions would have been acceptable in most instances. Therefore, the NRC wants to emphasize that typically the only noncompliance associated with this issue is the failure of the licensee to obtain NRC approval of the operator manual actions via an exemption request prior to relying on the selected manual actions.

The NRC has not had a high-profile enforcement action for failure to comply with the 1998 Order. The expenditure associated with any significant enforcement action involves the resources necessary to initially issue the action. Typically, this includes the significant costs associated with conducting additional analyses of issues, holding a regulatory enforcement conference, and issuing the enforcement action. Occasionally, the expenditure also includes the resources necessary to uphold the enforcement action. This would traditionally include reviewing a licensee’s response to the enforcement action, imposing the enforcement action, and supporting any requested hearing. These actions may result in substantially higher costs and delays.

- b. What was the justification for these fire protection regulations if they provide no “clear safety benefit”?

Answer:

The fire protection regulations provide a clear safety benefit by incorporating lessons learned from the Browns Ferry fire to limit the damage from a fire, such that one success path of equipment can be relied upon to bring the reactor to hot shutdown/standby conditions. The question relates to the statement in SECY 03-0100 regarding licensees’ failure to obtain NRC approval prior to relying on the selected manual actions. If the NRC chose to pursue enforcement, most licensees would have requested exemptions, rather than constructing passive barriers or increasing the separation between cable trains. Furthermore, based on past experience, the manual actions would have been acceptable to the NRC in most cases.

In the context of SECY 03-0100, the “no clear safety benefit” was the perceived lack of change in safety, since most licensees would have requested and, most likely, received approval for the manual actions, which are currently in place, rather than constructing passive barriers or increasing the separation between cable trains.

- c. When determining to pursue enforcement actions against licensees who are found to be out of compliance with NRC regulations, what consideration does the Commission typically give to how widespread the violations are within the industry?

Answer:

All licensees are expected to comply with the regulations or request and receive approval for exemptions. However, any widespread industry violation would prompt the NRC to further investigate the cause, such as the clarity of the regulatory requirements. In those instances in which widespread violations result from a lack of clarity within regulatory requirements or similar problems, the NRC may respond by exercising enforcement discretion and/or clarifying the regulations. In this case, we plan to issue acceptance criteria that will obviate the large number of requests for exemptions and the NRC's reviews of those requests.

- d. What is the purpose of having regulations if the Commission is prepared to ignore them as soon as a critical mass of licensees refuses to comply with them?

Answer:

The Commission does not ignore a licensee's refusal to comply with agency regulations, nor does it consider noncompliance acceptable. However, certain complex areas (such as fire protection) have resulted in confusion among the industry. In such cases, additional regulatory action is appropriate. In instances where the regulations can be improved to ensure a more consistent and clear understanding of the requirement, or revised to add an alternative means of adequately protecting the public's health and safety, the Commission has the authority to make such changes. In this case, it was apparent that the industry had misinterpreted the requirements.

- e. Has the NRC ever before rescinded or altered safety regulations to allow licensees who are out of compliance to avoid enforcement action? If so, list each such action, the date of the action, and the stated justification.

Answer:

The NRC has not amended its safety regulations to permit licensees to avoid enforcement actions. However, over the years, the agency has undertaken rulemaking in instances where licensees experienced difficulty in meeting the NRC's regulatory requirements. Some of these regulations were unclear, ambiguous, or inconsistent and, consequently, they may have resulted in potential or unknown noncompliance by licensees. In those instances where the regulations were found to be unclear, ambiguous, or inconsistent, the NRC considered whether rulemaking represented the best approach to address the regulatory situation or, alternatively, whether an exemption for a specific licensee was a more appropriate regulatory response. For example, the NRC instituted rulemaking to address inconsistencies in the requirements for conducting the "suitable inquiry" required by the Fitness-for-Duty Rule (10 CFR Part 26) and the background checks required by 10 CFR Part 73. The 1999 revision to 10 CFR 50.59 is another instance in which the NRC undertook rulemaking because of an apparent inconsistency in licensees' interpretations. Consistent with the requirements of the

Administrative Procedures Act, 5 U.S.C. 553, the justification for amending each of these regulations was published in the *Federal Register* notices of the final rulemaking.

The NRC reiterates that a decision to pursue rulemaking (or grant exemptions) is made only if the NRC first determines that adequate protection is being provided. However, in response to your specific request, the NRC does not maintain a list of rulemakings that have been instigated by, or contain specific provisions intended to address, regulatory circumstances where licensees are believed to be noncompliant with then-applicable rules.

- f. Has the Commission ever before rescinded or altered safety regulations because it would cost too much to enforce them? If so, list each such action, the date of that action, and the stated justification.

Answer:

The cost to enforce regulations has not been the basis for changing existing regulations. Rather, the NRC has made changes when it determined that existing requirements imposed significant regulatory actions without a clear safety benefit. The Commission's Backfit Rule (10 CFR 50.109) provides that one of the matters that may be considered in determining whether a backfit should be imposed is "the potential resource burden on the NRC associated with the proposed backfit and the availability of such resources." However, the cost considerations did not apply to the proposed rulemaking on operator manual actions. As clearly articulated in 10 CFR 50.109a(4)(i), backfit analysis is not required when the Commission determines that a modification is necessary to bring a licensed facility into compliance with the agency's regulations. The NRC does not maintain a list of regulations that were changed, *inter alia*, because of the costs of NRC enforcement.

Question 3: SECY 03-0100 states that "licensees faced with enforcement actions might flood the NRC with exemption or deviation requests, which could divert NRC resources from more significant safety issues and may not result in any net safety improvement if the operator manual actions are determined to be acceptable."

- a. Has the nuclear industry ever before responded to NRC enforcement of its regulations by flooding the Commission with requests for waivers or exemptions from the regulations? If so, describe when, under what circumstances and the Commission's response.

Answer:

The NRC received a large number of exemption requests during the initial backfit of the fire protection regulations. However, because the rule was to apply to facilities that, in most cases, were already built, the NRC recognized that compliance with the strict, prescriptive requirements of Appendix R might be very difficult for some facilities. Consequently, for plants that were built before 1979, the NRC backfitted the provisions in Sections III.G, III.J, and III.O of Appendix R. Toward that end, the NRC included a provision that allowed licensees to submit alternative acceptable methods for protecting redundant equipment for NRC review and approval under the exemption process. During the initial backfit, the NRC approved a large number of plant-specific exemptions to all three sections at approximately 60 nuclear power plants.

- b. In the past 10 years, how many requests for an exemption or deviation from NRC's fire protection regulation were made so that a licensee could instead use an Operator Manual Action? Of these requests, how many were granted?

Answer:

In the past 10 years, the NRC has received one request for exemption or deviation from the agency's fire protection regulations for a licensee to use operator manual actions to comply with Section III.G.2. This request came from Omaha Public Power District (OPPD), the licensee for Fort Calhoun Station, on November 8, 2002 (ADAMS Accession No. ML023170546). The licensee subsequently withdrew this request on October 1, 2003 (ADAMS Accession No. ML032810286). However, as stated in the answer to Part (a) of this question, prior to the last 10-year period, during the initial backfit, the NRC approved a large number of plant-specific exemptions to all three sections at approximately 60 nuclear power plants.

Question 4: SECY 03-0100 states that until the new regulations are adopted, numerous licensees will continue to be out of compliance with the fire protection regulations. Therefore, the staff proposed that it be allowed to refrain from any enforcement of the regulations.

- a. Is staff currently permitted to cease enforcement actions of these regulations? Under what authority?

Answer:

Under the current NRC guidance, if an inspector identifies a licensee's use of unapproved operator manual actions to meet the requirements of Section III.G.2, the inspector will review the licensee's actions against the acceptance criteria included in the fire protection inspection procedures. If the inspector concludes that the actions are reasonable and expected to meet the acceptance criteria, the inspector documents the issue as a Green finding pending a Commission decision on whether to proceed with rulemaking and an interim enforcement policy. If the Commission approves the interim enforcement policy, these issues would not be subject to enforcement action. By contrast, these actions would be subject to enforcement action if the Commission does not approve the interim enforcement policy.

If an inspector determines that the manual actions are not reasonably accomplishable and, therefore, implementation may not lead to a safe plant condition, the inspector will document the finding and its significance will be determined by the Significance Determination Process. For issues that are white or greater (i.e., low to moderate safety significance), the licensee would receive a cited violation and the NRC would take other appropriate action to ensure that the deficiency is corrected.

- b. Please provide a list of all NRC enforcement actions ever taken against a licensee that utilized unapproved Operator Manual Actions in lieu of complying with NRC fire protection regulations. For each action, please list the date, licensee, reactor name, violation, penalty, what corrective actions were ordered, and whether the NRC verified whether the corrective actions were in fact taken.

Answer:

As of April 7, 2004, the NRC has taken actions against licensees with regard to operator manual actions related to fire protection, as listed in the following table. Violations are identified as “non-cited” based on verification by the NRC that the issue is of very low safety significance and has been entered into the licensees’ corrective action program. Additionally, the documentation is maintained by the licensee for future NRC inspection. Although compensatory measures are currently in place at Arkansas Nuclear One, long-term corrective actions for the violation have not yet been proposed to the NRC.

<b>Date</b>	<b>Utility</b>	<b>Facility</b>	<b>Enforcement Action</b>	<b>Significance</b>
05/22/2003	Exelon	Peach Bottom	Non-Cited Violation	Green
06/02/2003	Energy Northwest	Columbia Generating Station	Non-Cited Violation	Green
09/01/2003	Southern Nuclear Operation Company	Edwin I. Hatch	Non-Cited Violation	Green
10/27/2003	Florida Power Corp.	Crystal River	Non-Cited Violation	Green
04/07/2004	Entergy	Arkansas Nuclear One	Violation	White

Question 5: According to SECY 03-0100, NEI stated in a January 11, 2002, letter to NRC staff that “NRC has implicitly accepted operator manual actions without exemption or deviation for some plants.”

- a. Please provide a copy of this letter, along with copies of all other letters, emails, presentations, or other correspondence between NEI or its members to the NRC regarding this matter.

Answer:

The following table lists the subjects of correspondence related to fire protection manual actions, along with the corresponding accession numbers associated with the official agency record of the correspondence in the NRC’s Agencywide Documents Access and Management System (ADAMS). (These documents are included on the enclosed CD-ROM).

<b>ADAMS Accession</b>	<b>Date</b>	<b>Title</b>
ML040330820	01/27/2004	Comments on Draft Criteria for Determining Feasibility of Manual Actions To Achieve Post-Fire Safe-Shutdown, <i>68 FR 66501 and 68 FR 69730</i>
ML033280013	12/01/2003	11/12/03 Meeting Summary to Discuss Draft Interim Criteria for Determining Acceptability of Manual Actions Taken To Achieve Safe Shutdown in Event of Fire
ML033240537	11/12/2003	Transcript of 11/12/2003 Interim Feasibility Criteria for Fire Protection Manual Actions: Public Meeting in Rockville, MD. (Pages 1–137).
ML033250238	11/12/2003	Meeting Slides of 11/12/03 - Interim Feasibility Criteria for Fire Protection Manual Actions
ML033030393	10/17/2003	Inspection Criteria for Fire Protection Operator Manual Actions 3/6/03 Criteria vs. Draft Interim Criteria (10/17/03)
ML031000093	04/09/2003	Letter from A. Marion, NEI, to J. Hannon, NRC, re: industry view on completing resolution of fire-induced circuit failure & manual actions
ML040990335	08/29/2002	Meeting slides of 08/29/02 Briefing for the NEI Fire Protection Information Forum
ML021980448	07/17/2002	06/20/2002 Meeting on Manual Actions for Fire Protection - Meeting Category 2
ML021720391	06/20/2002	Industry Use of Manual Actions for Post-Fire Safe-Shutdown Presentation, Attachment 2 for Meeting 06/20/02
ML021980365	06/20/2002	Follow-up Information on Meeting with Nuclear Energy Institute (NEI) on Manual Actions
ML021750218	06/20/2002	Minutes of the Committee To Review Generic Requirements Meeting Number 367
ML040370447	06/20/2002	NRC Staff Meeting with NEI on Manual Actions for Safe Shutdown
ML021410026	05/16/2002	Use of Manual Actions To Achieve Safe Shutdown for Fire Events
ML020300069	01/11/2002	01/11/02 letter from Alex Marion, NEI, to John Hannon, NRC, re Manual Actions for Safe Shutdown for Fire Events
ML013370302	11/29/2001	NRC Fire Protection Training Materials



- b. In what way has the NRC implicitly accepted Operator Manual Actions without exemption or deviation requests for some plants? Did NRC ever tell NEI or a licensee that it could rely on Operator Manual Actions without an exemption or deviation request? Please provide copies of all such communications.

Answer:

The NRC has not accepted any operator manual actions without evaluating the licensee's request for exemption or deviation from the requirements of Section III.G.2. The NEI made this claim by letter dated January 11, 2002 (ADAMS Accession No. ML020300069) and remains convinced, as indicated in a letter dated January 27, 2004 (ADAMS Accession No. ML040330820), that the NRC implicitly accepted operator manual actions. The NRC did not accept the NEI claim and responded to the NEI by letter dated May 16, 2002 (ADAMS Accession No. ML021410026). The Committee To Review Generic Requirements (CRGR) reviewed the NRC's response to the NEI claim on February 26 and May 6, 2002 (ADAMS Accession No. ML0217502181) and agreed that the NRC's response did not constitute a new NRC position or backfit.

Question 6: SECY 03-0100 states that NRC staff believe that if NRC chose to enforce current regulations and require the industry to repair or replace its fire barriers, that "the industry would appeal enforcement of the current requirements as a generic backfit" but that "the Committee for Review of Generic Requirements has reviewed this issue and does not consider enforcement of the current requirements a backfit." Does the Commission consider enforcement of the current requirements a backfit? Why or why not?

Answer:

The Commission does not consider the enforcement of the current requirements as a generic backfit, because the NRC has never changed its interpretation of Section III.G.2 as mandating the use of fire barriers, fire detection, and fire suppression, and requiring that manual actions must be approved by exemption. The NRC reviewed the generic backfit issue in detail in the course of responding to the NEI letter dated January 11, 2002. The CRGR also reviewed this issue, and the meeting minutes are discussed in our answer to Part b of this question, above.

Question 7: SECY 03-0100 also states that staff assumes that the NRC would approve most applications for waivers or exemptions. On what basis was this assumption made?

Answer:

The NRC would approve exemptions from the requirements of Section III.G.2, provided that the licensee could demonstrate that the proposed manual actions are feasible and would provide an acceptable level of safety. In 2002, the NRC considered external stakeholder input, reviewed various findings identified since the inception of the Reactor Oversight Process (ROP) related to Section III.G.2, and considered exemptions issued since the publication of Appendix R to 10 CFR Part 50. In so doing, the NRC determined that those manual actions that could be demonstrated to be reliably accomplished to achieve and maintain the reactor shutdown should

provide an acceptable level of safety and, as a result, initiated actions to revise Section III.G.2. The revision to the rule would allow the use of manual actions that meet acceptance criteria, in lieu of reviewing (and most likely approving) numerous exemption requests.

### **Questions on the Timing of the Proposed Change in Regulations**

SECY-03-0100 states that “because of the possible public sensitivity of this issue, the staff does not believe that the proposed rulemaking should be accelerated. To enhance public confidence, the staff intends to process this rulemaking as a normal notice and comment rulemaking, allowing full opportunity for public comment.” The full proposed process would have taken more than 2 years.

Instead of following these recommendations, the Commission chose to publish the proposed criteria in the *Federal Register* the day before Thanksgiving, and provide only 30 days for public comment. Moreover, the Commission proposed publication of both the interim and final rule simultaneously. The NRC ended up changing its plans when stakeholder groups complained that the expedited timeframe would not provide sufficient time for them to comment.

Question 1: Why did the Commission choose to publish its *Federal Register* notice the day before Thanksgiving, provide only 30 days for the public to comment, and propose simultaneous publication of both the interim and final rule?

Answer:

The *Federal Register* notice published on November 26, 2003 (68 FR 66501), was **not** part of a rulemaking activity. Instead, the notice requested public comments on acceptance criteria to be used in an interim enforcement policy to be in effect until a possible revised rule on operator manual actions would become effective. To ensure that the public knew that there would be additional opportunities to comment on draft criteria for acceptable operator manual actions as part of the contemplated rulemaking process, the notice stated, “*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 (emphasis added).*”

The NRC provided 30 days for public comment on the draft acceptance criteria for enforcement discretion in response to stakeholder interaction that suggested that 30 days was a sufficient period for submission of comments. In a public meeting on October 17, 2003, the NRC began public discussion of the interim enforcement policy and associated draft interim acceptance criteria for operator manual actions. Later, on November 12, 2003, the NRC held a public meeting to solicit stakeholder comments on the draft criteria. Representatives from the Union of Concerned Scientists, the Nuclear Information and Resource Service, and Greenpeace were specifically invited. During this meeting, both nuclear industry stakeholders and members of the public requested that the NRC allow a 30-day comment period for the interim acceptance criteria. In response to these requests, a *Federal Register* notice containing the criteria was subsequently published on November 26, 2003 (68 FR 69730), with a 30-day comment period ending on December 26, 2003. We note the NRC did not select the publication date of November 26, 2003; rather, that date was determined solely by the Office of

the Federal Register (OFR), based upon the date that the OFR received the notice from the NRC and its own input schedule and workload.

To promote openness and enhance public stakeholder input, the NRC staff held two public meetings and then published its draft criteria for an interim enforcement policy in the *Federal Register*. The NRC's solicitation of public comments on these draft criteria for an interim enforcement policy must not be misinterpreted as the simultaneous publication of an interim and final rule.

Question 2: Did the Commission vote to shorten the public comment period? If so, how did each Commissioner vote? If not, how was this decision made?

Answer:

The NRC did not "shorten" the public comment period. Additionally, the Commissioners had no involvement in determining the length of the public comment period for the interim enforcement policy. As noted in our response to the previous question, providing the comment period for the interim enforcement policy was not part of a rulemaking. Rather, it was a public outreach effort voluntarily undertaken by the NRC. There is no standard public comment period for such an activity; the NRC used its judgment to determine its duration. As indicated above, the NRC believed that the general consensus of public stakeholders at the meeting on November 12, 2003, was that a 30-day comment period was adequate. Accordingly, the NRC provided a 30-day comment period.

Question 3: What was the process through which the Commission reversed itself and lengthened the public comment process? Did the Commission vote to reverse itself, and if so, how did each Commissioner vote?

Answer:

The NRC staff made the decision to extend the public comment period; the Commissioners were not involved. Shortly after publication of the *Federal Register* notice on November 26, 2003, the NRC received numerous email requests from members of the public stating that they needed additional time to provide comments on the draft interim criteria for the interim enforcement policy. Accordingly, on December 15, 2003, the NRC published a subsequent *Federal Register* notice extending the comment period until January 26, 2004.

Question 4: Please describe each step and the associated timeframe for a typical NRC rulemaking on subjects that involve changes to safety regulations.

Answer:

In accordance with the policy outlined in NRC Management Directive 6.3, "The Rulemaking Process," when the NRC believes there is a need for a rulemaking activity, the agency first prepares a rulemaking plan similar to the plan on operator manual actions contained in SECY-03-0100. The rulemaking plan explains the need for the rule change, the expected impacts, and the resources involved for both licensees and the NRC. If the rulemaking is intended to address an area where existing regulatory requirements are confusing, ambiguous, or known to be the object of differing interpretations, the rulemaking

plan discusses the possible need for an interim enforcement policy during the interim time period before the rule change becomes effective. The rulemaking plan is then provided to the Commission which votes to determine whether the rulemaking activity will be initiated. After the Commission approves a rulemaking plan that specifies the need to develop an interim enforcement policy, the NRC staff begins working on both the enforcement policy and the proposed rule as parallel activities. Completion of the interim enforcement policy usually occurs before the proposed rule is published. The NRC usually takes about 9 months to complete a proposed rule and provide it to the Commission for approval. After Commission approval, the proposed rule is published in the *Federal Register* for public comment. The duration of the public comment period is typically 75 days, in part, to comply with the provisions of the North American Free Trade Act for "standard setting" rulemakings. Next, the NRC staff reviews and analyzes the public comments and makes necessary modifications to the rule. For a relatively simple rule change without extensive public comments, it may take as little as 7 months for the NRC staff to prepare a final rule package and provide it to the Commission. For more complex issues with extensive public comments, 12 months or more may be needed to prepare a final rule. After the Commission approves the final rule, it is published in the *Federal Register*. Final rules typically become effective 30 days after publication.

Question 5: What is the current timeframe for this regulatory change? Will the NRC follow the recommendations contained in SECY-03-0100 for each stage of the regulatory process, and if not, why not?

Answer:

#### *Interim Enforcement Policy*

The current schedule is to provide the interim enforcement policy to the Commission for approval in summer 2004.

#### *Rulemaking on Operator Manual Actions*

The current schedule is to provide the proposed rule to the Commission for approval in late 2004. The final rule is expected to be completed and sent to the Commission about 9 months after Commission approval of the proposed rule and completion of the normal notice and comment process.

For each step of the regulatory process, the NRC has followed the recommendations in SECY-03-0100, which the Commission approved in a staff requirements memorandum dated September 12, 2003.

1998 THERMO-LAG 330-1 CONFIRMATORY ORDERS RELATED TO FIRE PROTECTION				
Plant/Docket No.	Order Consent	Confirmatory Order	Order Completion	Comments
<b>St. Lucie 1 50-335</b>	<b>06/03/98 ML040990305</b>	<b>07/13/98 ML013580124</b>	<b>04/07/00 ML003703549</b>	St. Lucie Unit 2 did not receive a confirmatory order, completed GL 92-08 corrective actions June 23, 1998. (ML0411000530)
<b>Three Mile Island 1 50-289</b>	<b>05/05/98 ML040990295</b>	<b>05/22/98 ML003765653</b>	<b>12/30/99 ML003676460</b>	TMI-1 has 2 orders (08/11/1999 (ML003766024)) & 2 completion letters (03/12/2000 (ML003693928)).
Columbia 50-397	03/12/98 ML022130148	03/25/98 ML022130143	01/19/00 ML003678400	
Peach Bottom 2 & 3 50-277, 278	04/27/98 ML011560812	05/19/98 ML040990313	10/12/99 ML040990314	
Limerick 1 & 2 50-352, 353	04/27/98 ML011560812	05/19/98 ML011560778	09/17/99 ML040990326	
Crystal River 3 50-302	05/06/98 ML040990150	05/21/98 ML020670496	05/25/00 ML003722384	
Susquehanna 1 & 2 50-387, 388	06/03/98 ML010160066	07/02/98 ML010160064	04/28/00 ML003711917	
<b>North Anna 1 50-338</b>	<b>05/22/98 ML040990299</b>	<b>06/15/98 ML013530026</b>	<b>02/01/99 ML040990189</b>	North Anna Unit 2 did not receive a confirmatory order, completed GL 92-08 corrective actions May 22 1998. (ML0410990299).
Sequoyah 1 & 2 50-327, 328	05/13/98 ML041000264	06/18/98 ML013320074	06/30/99 ML040990478	
Davis-Besse 50-346	06/11/98 ML040990279	06/22/98 ML021210216	01/25/99 ML040990274	
Clinton 50-461	05/22/98 ML040990486	06/26/98 ML020990547	04/27/99 ML040990340	
Comanche Peak 1 & 2 50-445, 446	06/02/98 ML040990290	07/28/98 ML021820291	12/22/98 ML040990491	
<b>Turkey Point 3 &amp; 4 50-250, 251</b>	<b>02/08/99 ML040990332</b>	<b>07/09/99 ML013390600</b>	<b>06/18/01 ML011770240</b>	Turkey Point's original order consent was modified by consent letter dated 05/27/1999 (ML040990320).
Oyster Creek 50-219	05/11/98 ML040990364	05/22/98 ML040990167	01/30/01 ML010370267	
Hatch 1 & 2 50-321, 366	06/02/98 ML040990485	06/24/98 ML013030297	10/16/98 ML040990196	
<b>Surry 1 &amp; 2 50-280, 281</b>	<b>05/22/98 ML040990350</b>	<b>07/09/98 ML012700090</b>	<b>02/01/99 ML040990189</b>	Surry Unit 2 completion letter 07/07/1999 (ML041000485).
South Texas Project 1 & 2 50-498, 499	06/25/98 ML040990350	10/02/98 ML040990301	02/08/99 ML040990180	