

RESPONSE TO PUBLIC COMMENTS ON THE PROPOSED OPERATOR MANUAL ACTIONS RULE

The proposed rule on post-fire operator manual actions was published in the *Federal Register* on March 7, 2005 (70 FR 10901), with a 75-day comment period ended on May 23, 2005. The NRC received comments from organizations and individuals. Copies of the comments are available for public inspection and copying for a fee at the U.S. Nuclear Regulatory Commission's (NRC's) Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Five individuals, an individual representing a public interest group, four utilities with nuclear reactors, one nuclear utility group representing six plants with nuclear reactors, the Nuclear Energy Institute (NEI), and two industry consultants submitted comments. Four out of the five individual commenters objected to the proposed rule with no further technical substantiation. One individual commenter and an industry consultant also objected to the proposed rule but made recommendations to enhance or modify elements of the rule and the draft guidance document. The individual representing a public interest group also objected to the proposed rule and provided a detailed discussion. Another objection for the proposed rule came from an industry consultant. The four utilities, the nuclear utility group, and NEI objected to the requirement for fire detectors and automatic fire suppression, as well as the time margin in the proposed rule. The utilities and the nuclear utility group also provided detailed comments to the rule language and draft regulatory guide. The NEI also provided alternative rule language. The two consultants provided comments requesting clarifications to the rule language and the draft regulatory guide. The utilities and NEI also asserted that the proposed rule does not meet the objectives of the rulemaking as proposed by the NRC in SECY-03-0100, "Rulemaking Plan on Post-Fire Operator Manual Actions."

In the following paragraphs, the NRC discusses the resolution of the public comments by topic.

Backfit Claim

COMMENT: Several industry commenters claimed that the proposed rule is a backfit and that NRC guidance has allowed the use of operator manual actions under paragraph III.G.2 of Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," to Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," of the *Code of Federal Regulations* (10 CFR Part 50). Commenters claimed that there are no provisions in the regulations or guidance that prohibit the use of operator manual actions under paragraph III.G.2.

RESPONSE: The NRC does not agree with the commenters' claims. Paragraph III.G.2 is very specific with regard to acceptable means of ensuring that one of the redundant trains is free of fire damage. Paragraph III.G.2 states the following:

Except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:

- a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of, or supporting such fire barriers, shall be protected to provide fire resistance equivalent to that required of the barrier;
- b. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or
- c. Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area.

Operator manual actions to demonstrate compliance with paragraph III.G.2 of Appendix R, are not listed as an acceptable means of ensuring that one of the trains is free of fire damage. Consequently, unless alternative or dedicated shutdown capability is provided, redundant trains credited for post-fire safe shutdown and located in the same fire area must be protected in accordance with paragraph III.G.2 without the use of operator manual actions unless the NRC has issued an approved exemption for the use of operator manual actions. This position was reiterated in the May 16, 2002, letter from J. N. Hannon of the NRC to A. Marion of NEI (ADAMS Accession No. ML021410026) and the Committee to Review Generic Requirements (CRGR) Meeting Minutes No. 367 (ADAMS Accession No. ML021750218) noted that this letter

does not contain any new staff positions. When redundant safe shutdown trains are in the same fire area, paragraph III.G.1 protection for those redundant safe shutdown trains may not be claimed by crediting an operator manual action at an emergency control station. Paragraph III.G.2 specifically addresses the means to ensure one train is free of fire damage when those trains are in the same fire area and does not allow the use of operator manual actions unless the NRC has issued an approved exemption for the use of operator manual actions. (Refer to RIS 2005-30, "Clarification of Post-Fire Safe-Shutdown Circuit Regulatory Requirements," dated December 20, 2005, ADAMS Accession No. ML053360069, for additional discussions.)

Notwithstanding any past instances in which the NRC did not object to industry practice, it is NRC's position that operator manual actions are not authorized by Appendix R, paragraph III.G.2 provisions and is a noncompliance unless the NRC has issued an approved exemption.

Section III.P of the Proposed Rule

COMMENT: A public interest group commenter supported the addition of paragraph III.P without the addition of paragraph III.G.2(c-1).

RESPONSE: The NRC does not agree with the comment to promulgate paragraph III.P without a corresponding implementing regulatory paragraph. An implementing regulatory paragraph, such as would have been done under paragraph III.G.2(c-1), would define the application of objective and enforceable acceptance criteria.

Proposed Rule Does Not Meet Rulemaking Objectives

COMMENT: The NEI and industry commenters stated that the proposed rule will not reduce or eliminate the number of exemption requests and that NRC costs will not be reduced. Industry commenters stated that the proposed rule will require some licensees to seek exemption requests because of the requirement for fire detectors and automatic fire suppression systems. One industry commenter estimated 20 exemptions per unit. Another industry commenter stated that the requirement for fire detectors and automatic fire suppression systems will significantly reduce the benefits of the proposed rule.

RESPONSE: Based on industry comments, the proposed rule may not reduce or eliminate exemption requests. SECY-03-0100 outlined the advantages of rulemaking. In SECY-03-0100, the NRC stated that the intent was to develop acceptance criteria, rectify most compliance issues associated with operator manual actions, avoid the need for licensees to prepare exemption requests, and avoid backfit issues for licensees who use operator manual actions in lieu of fire barriers. Avoiding the exemption requests for feasible and reliable operator manual actions was a primary advantage of the rulemaking. However, commenters noted that the requirement for fire detectors and automatic fire suppression systems and, in some cases, the time margin will prompt exemption requests. Industry comments during the public comment period suggested that the exemption requests would primarily be for automatic fire suppression systems. Although licensees continue to have the option of submitting exemption requests to the NRC under 10 CFR 50.12, "Specific Exemptions," the NRC does not view exemption requests as the preferred option to compliance as was made clear in the

Commission's response to SECY-04-0233, "Proposed Rulemaking—Post-Fire Operator Manual Actions (RIN 3150 AH-54)," dated January 18, 2005.

Requirement for Fire Detectors and Automatic Fire Suppression

COMMENT: The industry commenters and NEI objected to the proposed rule's requirement for fire detectors and automatic fire suppression systems in fire areas where redundant trains necessary to achieve and maintain hot shutdown conditions are located. The commenters argued that each plant's fire hazards analysis (FHA) identified the areas where fire hazards exist and where fire detectors and automatic fire suppression systems are necessary to mitigate the potential effects of fires. The commenters also argued that this requirement would lead licensees to provide full area fire suppression throughout many portions of fire areas that currently do not require fire suppression based on the licensees' FHAs. The commenters also suggested that additional water-based fire suppression systems will increase the risk due to internal flooding

RESPONSE: The NRC does not agree with the commenters' views. The basis for fire detectors and automatic fire suppression systems was articulated in the *Federal Register* notice of the proposed rule. The requirement for fire detectors and automatic fire suppression systems is primarily based on maintaining a reasonable balance of defense-in-depth; addressing the reliability of a manual action in lieu of a fire barrier, or separation by rapidly controlling and extinguishing fires, thereby enhancing the licensee's ability to perform feasible and reliable operator manual actions; and ensuring consistency with paragraphs III.G.2 and III.G.3 of Appendix R to 10 CFR Part 50. Licensees who seek an exemption for the use of an

operator manual action without fire detectors or an automatic fire suppression system must provide an adequate basis, in accordance with 10 CFR 50.12.

The NRC also does not agree with the contention that the requirement for automatic fire suppression would necessitate full area fire suppression. The NRC believes that the commenters have not considered existing guidance in Generic Letter (GL) 86-10, "Implementation of Fire Protection Requirements," Enclosure 1, Item 5 which states, in part, that, "where full area suppression and detection is not installed, licensees must perform an evaluation to assess the adequacy of partial suppression and detection to protect against the hazards in the area." The GL 86-10 guidance clearly allows a licensee to evaluate and determine the extent of suppression and detection in a fire area based on the hazards. Depending on the circumstances and conditions in the plant, full area automatic fire suppression system may or may not be necessary. However, the GL 86-10 guidance also makes it clear that if a licensee does not provide any fire suppression or detection, an exemption must be requested.

The NRC also disagrees with the commenters' conclusion that a water-based fire suppression system will always increase the risk due to internal flooding. The NRC believes that an increased risk due to internal flooding may or may not be a concern, depending upon plant specific circumstances. Licensees can evaluate the risk due to flooding by considering alternative fire suppression systems or implementing mitigative strategies to address the concern. The NRC believes that alternative water-based fire suppression systems, designed in accordance with the applicable NFPA standard, and combined with other mitigative strategies, may be one way to address the risk, if any, due to internal flooding.

Some commenters asked for clarification regarding when the fire detectors and automatic fire

suppression system are required. The proposed requirement for fire detectors and an automatic fire suppression system applied only to the area where the fire occurs, not to the area(s) where the operator manual actions will take place.¹

Time Margin Criterion

COMMENT: The industry commenters and NEI objected to the time margin criterion, and more specifically, to the time margin factor as discussed in DG-1136, "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire," dated February 2005. In particular, the commenters argued that, given the conservative nature of most of the analyses used to support Appendix R evaluations, an additional time margin, as proposed in DG-1136, was unnecessary. Commenters noted that the time margin, as proposed, was redundant to the margin already existing in current analyses and, hence, it added more time penalty to the manual actions. In addition, it did not account for other defense-in-depth features already available in typical fire protection programs and would require significant and costly rework of existing analyses in order to reallocate the existing analysis margin without any safety benefit. Comments were also made that using a one-size-fits-all doubling of the manual action diagnosis and implementation time, or using any other specific multiplicative or additive factors, did not recognize the variability of the risk significance of some manual actions. Further, a

¹Only in the presumably rare case in which the operator manual actions would also occur in the same fire area as the fire itself would fire detectors and an automatic fire suppression system have to be installed, "in the area where the operator manual actions are taken," for these operator manual actions to receive credit. This is envisioned only if a very large fire area experiences a very localized fire, such that the fire effects do not preclude access to, egress from, and operator manual actions in, a distant location within the very large area.

couple of comments suggested that ensuring that the manual actions had to be reliable (as opposed to feasible) went beyond current requirements for other actions, such as those related to using the emergency operating procedures.

RESPONSE: The NRC believes that, to ensure that adequate time exists to perform an action, having a margin between the demonstrated and estimated time to diagnose and perform manual actions remains a prudent expectation, especially considering the uncertainties associated with the consequences (e.g., smoke) of fire events. Therefore, the concept of ensuring that adequate time exists should be retained in any future internal staff guidance to account for those uncertainties. The NRC recognizes that a range of acceptable alternatives exists to show that there is adequate time. Possible alternatives are: (1) the licensee justifies that all uncertainties are adequately covered by the conservative nature of existing analyses and programs; or (2) the licensee specifically accounts for the uncertainties not presently covered by adding a time margin. Licensees would have to justify the adequacy of existing analyses, or make changes to the analyses or the actions themselves, so that uncertainties are enveloped or otherwise addressed. This provides a flexible range of implementation approaches that licensees may use to implement the margin concept, while maintaining the notion of using extra time as a surrogate to directly account for uncertainties.

The time margin factor of two was not part of the proposed rule acceptance criteria in paragraph III.P of Appendix R to 10 CFR Part 50. It was introduced in DG-1136 as one way of demonstrating adequate time margin based on the results of an expert elicitation panel. The NRC recognizes that a single value of two may or may not be sufficient to show adequate time

margin when accounting for uncertainties. Because the timing for the operator manual actions is scenario and plant specific, the analyses conducted by a licensee would have to justify the adequacy of the time margin.

In summary, the NRC believes that the concept of time margin is prudent to ensure reliability of operator manual actions. The exact value of a time margin is dependent on the specific scenario and it would be incumbent on the licensee to show through analyses that adequate time margin exists to perform the operator manual action.

Rule Structure and Application of Operator Manual Actions to Noninerted Containments

COMMENT: Some commenters interpreted that the placement of the new wording in the proposed paragraph III.G.2(c-1) will limit the use of operator manual actions to paragraph III.G.2.c, and that it would not resolve situations for operator manual actions performed inside noninerted containments.

RESPONSE: The NRC does not agree with this interpretation. Paragraph III.G.2 lists the means to ensure that one train remains free of fire damage. Any one of the means (i.e., paragraphs III.G.2(a), III.G.2(b), III.G.2(c), or III.G.2(c-1) (had it been promulgated)) is sufficient to meet the requirement of paragraph III.G.2. The paragraph discussing inside noninerted containment in paragraph III.G.2 would have been placed after paragraph III.G.2(c-1) and states, "inside noninerted containments one of the fire protection means specified above or. . . ." Because paragraph III.G.2(c-1) would have been placed directly above the paragraph for noninerted containment, it is clear that paragraph III.G.2(c-1) would have been one of the fire

protection means available to the licensee for inside noninerted containment.

Actions Inside the Control Room

COMMENT: One commenter asked for clarity regarding operator actions inside the control room.

RESPONSE: The application of the proposed operator manual action rule would have been for the use of operator manual actions outside of the main control room. Actions taken by operators inside the main control room, when the fire is outside of the main control room, are considered to be feasible and reliable by virtue of the relatively benign environmental conditions, and licensed operator training and qualifications.

Proposed Alternative Rule Language by NEI

COMMENT: The NEI proposed alternative rule language that would delete the NRC's proposed revisions to paragraph III.G.2(c-1) and delete the NRC's codification of acceptance criteria in paragraph III.P. Some of the other industry commenters endorsed the NEI comments. The NEI proposed to define three terms in paragraph III.G.1, claiming that the definitions reflect various staff positions and interpretations over the years.

RESPONSE: The NRC has considered the NEI proposal. Paragraph III.G.2 clearly states that, where redundant trains are located in the same fire area, the requirements of paragraphs III.G.2(a), (b) or (c). shall be met to ensure that one of the redundant trains is free of fire

damage. The regulation does not allow a protection scheme for redundant trains in the same fire area using paragraph III.G.1, even if terms were defined as proposed by NEI. The proposed revision by NEI would contradict the requirements of paragraph III.G.2 without a corresponding change to rule language in paragraph III.G.2 allowing the proposed NEI alternative. Aside from the conflict that the alternative language would impose on paragraph III.G.2, the alternative language does not ensure feasibility and reliability of the manual action absent acceptance criteria as part of the rule. Furthermore, the lack of automatic fire suppression is essential to defense-in-depth, as discussed in the proposed rulemaking. In addition, the NRC believes that the NEI proposal would effectively eliminate the requirement of paragraph III.G.3 because the NEI proposal would allow licensees to only consider paragraph III.G.1 for compliance. (See also NRC's response to the section entitled "Backfit Claim," in this enclosure.)

Acceptance Criteria of Inspection Procedure (IP) 71111.05T

COMMENT: The NEI claimed that the acceptance criteria contained in NRC IP 71111.05T (March 2003) is a reasonable approach for assessing the feasibility of operator manual actions.

RESPONSE: The acceptance criteria in IP 71111.05T, "Fire Protection (Triennial)," must be taken in the context of the inspection procedure. The inspection criteria are used as guidance by NRC inspectors to determine if unapproved operator manual actions are feasible and can be used as a compensatory measure while corrective actions are taken by the plant. The acceptance criteria developed for the proposed rule was written to establish the standards to ensure feasibility and reliability of operator manual actions, establish consistency as to what

operator manual actions would be allowed, and provide parameters used to conduct evaluations and inspections.

Risk-Informed, Performance-Based Approaches

COMMENT: One commenter stated that the proposed rule misses an opportunity to introduce risk-informed and performance-based approaches into existing fire protection regulations.

RESPONSE: The NRC did not choose to revise only one section of the existing Appendix R requirements as risk-informed and performance-based and leave the remaining parts deterministic. Because the existing Appendix R requirements are deterministic and prescriptive, changing one part of one section would lead to a rule in which one option in one part of the rule has an approach that differs significantly from the rest of the rule. Since licensees already have the option of using the risk-informed and performance-based approach through 10 CFR 50.48(c), any efforts to change one part of an existing rule would duplicate efforts previously completed.

Approved Operator Manual Actions

COMMENT: Several licensees requested clarifications regarding what the NRC meant by approved operator manual actions. One commenter cited its plant-specific situations, quoting from an inspection report and a safety evaluation report (SER). Another commenter claimed that plants with existing approved exemptions would have to come into compliance with the requirements of the proposed rule.

RESPONSE: In the proposed rule Federal Register notice, the NRC stated, “licensees who currently have approved operator manual actions will not be required to perform any additional actions (such as analysis or documentation). Licensees who employ operator manual actions but have not received NRC approval are in violation of paragraph III.G.2 of Appendix R.” It is clear from this statement that licensees who have approved operator manual actions to demonstrate compliance with paragraph III.G.2 do not need to backfit their operator manual actions to the new criteria, nor are they required to resubmit their exemptions, provided the exemptions remain valid. Approved operator manual actions are plant-specific and were those previously accepted in formal exemption/deviation requests and in SERs. Licensees can demonstrate that they have an approved operator manual action by citing the applicable licensing action document, such as an NRC-approved exemption/deviation, or the licensee’s docketed correspondence associated with the exemption/deviation, or documents that comprise a licensee’s licensing basis as discussed in the attachment to RIS 2005-20, “Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and On Operability.” However, NRC inspection reports are not acceptable citations to demonstrate that a licensee has an approved operator manual action, in as much as inspection reports are not issued to approve the use of a methodology that does not meet NRC regulations or a licensee’s specific licensing basis (although an inspection report may be a basis for a backfitting claim by an individual license).

Cost

COMMENT: Industry commenters stated that plant modifications associated with the installation of automatic fire suppression systems and application of the time margin factor or

licensing actions associated with exemptions/deviations represent a significant cost to the industry with marginal or no increase in plant safety. Industry commenters and NEI stated that the estimated cost for the design and installation of automatic fire suppression systems is in the range of \$10 million to \$100 million per site.

RESPONSE: The NRC discussed the bases for the requirement for fire detectors and automatic fire suppression in the proposed rule and responded to comments under the section of this enclosure entitled, "Requirement for Fire Detectors and Automatic Fire Suppression." The NRC also discussed the bases for the time margin in the proposed rule and responded to comments in the section of this document entitled, "Time Margin Acceptance Criteria." Absent a final rule under paragraph III.G.2(c-1), licensees have available to them paragraphs III.G.2.(a), III.G.2.(b), or III.G.2.(c) as other means to comply with the requirements of paragraph III.G.2. Paragraphs III.G.2(b) and III.G.2(c) currently require fire detectors and automatic fire suppression. Paragraph III.G.2(a) does not require fire detectors or automatic fire suppression. Therefore, the comment is applicable to those plant-specific situations in which there is no 3-hour fire barrier separation. The NRC based its proposed requirement for fire detectors and automatic fire suppression on safety and did not take into consideration the cost associated with compliance. Furthermore, licensees have 10 CFR 50.48(c) as an alternative compliance method for their fire protection program. (See also NRC responses in those sections entitled, "Requirement for Fire Detectors and Automatic Fire Suppression," and "Time Margin Acceptance Criteria," in this enclosure.)

Proposed Rule Does Not Provide Acceptable Equivalent Level of Protection

COMMENT: The commenter contended that the NRC did not provide an analysis demonstrating that operator manual actions are equivalent to the physical fire protection features required by General Design Criterion 3, "Fire Protection," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50 and by Appendix R, paragraph III.G.2. It was further contended that human actions are not comparable to fire barrier separation.

RESPONSE: The NRC disagrees with the first part of this contention. In the proposed rule, the NRC stated that the proposed operator manual action rule would offer protection comparable, not equivalent, to paragraphs III.G.2(b) or III.G.2(c), both of which require the additional layer of defense-in-depth protection provided by having fire detectors and automatic fire suppression capability. The NRC also stated that the proposed rulemaking provides reasonable assurance that the public health and safety are protected, consistent with the assurance provided by compliance with the current three options in paragraphs III.G.2(a), (b), or (c) of Appendix R, in part by the requirement for fire detectors and automatic fire suppression.

With respect to the contention that human actions are not comparable to fire barrier separation, the NRC recognized the following in the SECY-03-0100 rulemaking plan:

[r]eplacing a passive, rated, fire barrier . . . with human performance activities can increase risk. For some simple operator manual actions, the risk increase associated with human performance may be minimal. For other actions, unless

the operator manual actions are feasible, the risk increase could be significant . . . However, if the operator manual actions are feasible, the overall risk increase is minimal.

In SECY-04-0233, the NRC concluded that certain feasible and reliable operator manual actions could be accomplished and could provide an adequate level of safety to satisfy the underlying purpose of the fire protection rule for the areas set forth in paragraph III.G.2.

Reduces Defense-in-Depth

COMMENT: The commenter asserted that incorporating operator manual actions into paragraph III.G.2 effectively nullifies confidence that defense-in-depth is being adequately maintained.

RESPONSE: The NRC disagrees with the assertion that incorporating operator manual actions into paragraph III.G.2 effectively nullifies confidence that defense-in-depth is being adequately maintained. In SECY-04-0233, the NRC discussed feasible and reliable operator manual actions and concluded that any potential increases in risk to the public as a result of their use will be minimal. The NRC stated that its requirement that the operator manual actions must meet conservative acceptance criteria provides the NRC with reasonable assurance that such operator manual actions can be accomplished to safely shut down the plant in the event of a fire. These criteria would maintain safety by ensuring that licensees perform thorough evaluations of the required operator manual actions and preplan equipment needs. The NRC determined that the use of operator manual actions would not diminish the other

defense-in-depth objectives of the NRC fire protection program (i.e., the requirements that minimize the potential for fires and explosions and those which provide for rapidly controlling and extinguishing fires that do occur). To support the objective for rapidly controlling and extinguishing fires, the NRC had proposed the requirement for fire detectors and an automatic fire suppression system as part of the operator manual actions option. Accordingly, the NRC had previously determined that the proposed rulemaking provides reasonable assurance that the public health and safety are protected.

Undermines Public Confidence

COMMENT: The commenter contends that the proposed rule undermines public confidence in NRC's credibility and future enforcement policy of fire protection requirements, and that the NRC is accommodating the financial interests of the industry and licensee violations of the requirements.

RESPONSE: The NRC continues to conduct fire protection inspections through the reactor oversight process. Any issues identified by the inspectors are processed in accordance with NRC policies and procedures. Where appropriate, the NRC will take enforcement action as applicable. The NRC has not stopped the process of inspections and enforcement. The proposed rulemaking requirements were based on safety as discussed in the proposed rule's *Federal Register* notice.

Undermines Safety Oversight

COMMENT: The commenter asserts that the proposed rule undermines NRC's safety oversight because licensees would not have to go through the exemption process. The commenter further asserts that, with no exemptions, the public would be denied its due process by eliminating the opportunity to independently review those exemptions.

RESPONSE: The proposed rule would not have undermined the NRC's safety oversight. The NRC stated in SECY-04-0233 that the requirement of operator manual actions to meet conservative acceptance criteria provides the NRC with reasonable assurance that such operator manual actions can be accomplished to safely shut down the plant in the event of a fire. These criteria maintain safety by ensuring that licensees perform thorough evaluations of the required operator manual actions and preplan equipment needs. If the proposed rule were to be promulgated, NRC fire protection inspectors would verify that licensees' documented operator manual actions meet the NRC acceptance criteria through the existing reactor oversight process.

The NRC agrees that the proposed rule would have provided licensees with a fourth option without submitting an exemption request under 10 CFR 50.12, provided that the licensee met all of the proposed rule requirements, including the acceptance criteria. This is consistent with paragraphs III.G.2(a), III.G.2(b), or III.G.2(c) which do not require the licensee to submit an exemption request if that licensee complies with one of the options. The NRC's position is

based on the conclusion that a licensee who met the requirements of the proposed rule would have provided reasonable assurance that such operator manual actions can be accomplished to safely shut down the plant in the event of a fire.

Abandons Enforcement Action

COMMENT: The commenter contends that the proposed rule abandons NRC enforcement actions regarding orders that were issued to address Thermo-Lag fire barriers and that licensees credited unapproved operator manual actions.

RESPONSE: In 1998, the NRC issued a Confirmatory Order Modifying License (Order) to licensees who were not making adequate progress towards correcting issues identified with Thermo-Lag 330-1 fire barriers. Each Order was effective immediately upon issuance and became part of the operating license for each plant involved. These Orders remain in effect unless the Director, Office of Nuclear Reactor Regulation, relaxes or rescinds, in writing, any provisions of an Order upon a showing by the licensee of good cause. Between 1998 and 2001, the NRC received letters from licensees, to whom the agency had issued Orders, indicating completion of the ordered Thermo-Lag corrective actions. To date, none of the Orders issued for Thermo-Lag fire barriers have been relaxed or rescinded. Therefore, each Order continues to remain in effect and to be part of the operating license after withdrawal of the Operator Manual Actions Rulemaking.

The NRC continues to conduct inspections of licensees' fire protection programs under the reactor oversight process. Any noncompliances with the regulations and license conditions (including Orders) identified during the reactor oversight process will be processed in

accordance with NRC policies and guidelines in effect at the time. For example, the NRC staff issued the proposed rule for public comment in March 2005, including enforcement discretion, in accordance with enforcement guidance memorandum (EGM) 98-02, "Enforcement Guidance Memorandum—Disposition of Violations Of Appendix R, Sections III.G and III.L Regarding Circuit Failures," issued March 1998, and IP 71111.05T, while the staff proceeded through final rulemaking efforts. The enforcement discretion allowed the NRC to grant discretion for violations associated with unapproved uses of operator manual actions, provided that the conditions of EGM 98-02 are met and that the operator manual actions, used as a compensatory measure, were feasible in accordance with the criteria of IP 71111.05T. Following withdrawal of the rulemaking, the NRC plans to announce a withdrawal date for the enforcement discretion guidance in EGM 98-02 after which date enforcement discretion will no longer be available under that EGM.

Security Interface

COMMENT: One commenter stated that the proposed rule did not adequately consider both the significance and impact of operator manual actions over passive fire protection features in response and recovery from security-event-related fires. The commenter claimed that the NRC and industry did not adequately evaluate the significance and impact of codifying operator manual actions.

RESPONSE: The NRC plans to address the security safety interface on a more global basis, rather than address the issue on a rule-by-rule basis. The NRC plans to make revisions to 10 CFR Part 73, "Physical Protection of Plants and Materials," that will address the security

safety interface.

Request for Comments

The NRC specifically requested comments on time margin and time margin factor, automatic versus fixed fire suppression system, and the applicability of the operator manual action acceptance criteria to paragraphs III.G.1 and III.G.3.

Request for Comment 1, Time Margin

Those commenters that responded to this request objected to the time margin and are opposed to requiring any type of time margin factor. The commenters objections were basically the same as those made to the rule language and draft regulatory guide. The NRC responded to the time margin comments under the section entitled, "Time Margin Criterion," in this enclosure.

Request for Comment 2, Automatic versus Fixed Fire Suppression

Those commenters that responded to this request objected to the requirement for fire suppression in general. The commenters' objections were basically the same as those made to the rule language. One individual commenter stated that, although he does not agree that suppression is required, the automatic suppression requirement would be more consistent with paragraph III.G.2. The NRC responded to the fire suppression requirement comments under the section entitled, "Requirement for Fire Detectors and Automatic Fire Suppression," in this enclosure.

Request for Comment 3, Applicability of Acceptance Criteria

With the exception of two commenters, those that responded to this request objected to applying the acceptance criteria to paragraphs III.G.1 and III.G.3. If the acceptance criteria were applied to paragraphs III.G.1 and III.G.3, commenters stated that it would result in compliance issues, plant redesigns, and modifications. The comments basically supported the NRC's original position (as stated in the proposed rule *Federal Register* notice) that the proposed rule acceptance criteria should apply only to a proposed rule paragraph III.G.2(c-1).

Public Meeting September 30, 2005

On September 30, 2005, the NRC held a Category 2 public meeting at NRC Headquarters in Rockville, Maryland, to discuss planned closure of the Operator Manual Actions Rule. During this meeting, the NRC also received public comments on this closure plan from industry, NEI, the Nuclear Information and Resource Service (NIRS), and an industry consultant. The NRC subsequently received separate emails from the Union of Concerned Scientists and NIRS who agreed with the NRC recommendation to withdraw the proposed rule.

COMMENT: The NIRS expressed concern that the NRC had apparently "abandoned" Orders issued to address Thermo-Lag fire barriers.

RESPONSE: See the NRC response in the section entitled, "Abandons Enforcement Action," in this enclosure.

COMMENT: The NIRS stated that the NRC loses credibility with the public with open-ended enforcement discretion.

RESPONSE: The NRC policies for enforcement discretion are approved by the Commission. Policies are revised with Commission approval when conditions change, circumstances warrant, or when, in the opinion of the NRC, enforcement is no longer necessary. The enforcement discretion available under EGM 98-02 will no longer be available following a date announced in a future regulatory issue summary.

COMMENT: The NIRS also stated that it is not opposed to operator manual actions as long as they are an addition to defense-in-depth and not a substitute for it.

RESPONSE: See the NRC response in the section entitled, "Proposed Rule Does Not Provide Acceptable Equivalent Level of Protection," in this enclosure.

COMMENT: The NEI expressed disappointment in the NRC approach to recommending rule withdrawal and continues to maintain that, absent a new rule, the NRC position that an exemption is required to use an operator manual action in Appendix R, paragraph III.G.2, is a backfit.

RESPONSE: See the NRC response in the section entitled, "Backfit Claim," in this enclosure.

COMMENT: One industry commenter expressed a desire to be able to make comments to any internal staff guidance that may be developed by the NRC for staff use in reviewing licensing actions.

RESPONSE: The NRC will continue to follow internal procedures and policies in the development of internal staff guidance. Stakeholder input will be solicited when appropriate in accordance with NRC procedures and policies.

REGULATORY GUIDE COMMENTS

Industry, the NEI, industry consultants and an individual provided comments to DG-1136. The NRC has summarized these comments below. The NRC does not plan to finalize DG-1136 because the proposed rule has been withdrawn. However, the NRC will consider the comments to DG-1136 during our planned development of a new NUREG that will provide guidance on acceptable post-fire operator manual actions. The NRC plans to reference the new NUREG in an update to SRP Section 9.5.1, "Fire Protection Program," of NUREG-0800 to address post-fire operator manual actions acceptance guidance that will be used to enhance the NRC regulatory review process during the evaluation of future licensing actions, such as exemption requests.

Equipment and Accessibility Criteria

COMMENT: There were a few comments related to clarifying what equipment had to be functional and the degree of accessibility intended. In particular, there were comments related to the following items:

- Whether fire detection and suppression equipment had to be protected

- Whether manual valves now have to be addressed as to their functionality following a fire
- The degree to which portable equipment and communication equipment had to be controlled, protected, and accessible

Use of References

COMMENT: There were a few comments citing concerns about inappropriate references being used to justify certain acceptance criteria, as well as a concern that quoting from NUREG-0800 and American National Standards Institute/American Nuclear Society (ANSI/ANS)-58.8-1994 was also inappropriate.

Time Margin Criterion Guidance

COMMENT: There were many comments concerning the time margin. In particular, the argument that, given the conservative nature of most of the analyses used to support Appendix R evaluations, an additional time margin, as proposed in DG-1136, was unnecessary. Commenters noted that the time margin, as proposed, was redundant to the margin already existing in current analyses and, hence, it added more time penalty to the manual actions. In addition, it did not account for other defense-in-depth features already available in typical fire protection programs and would require significant and costly rework of existing analyses in order to reallocate the existing analysis margin without any safety benefit. Comments were also made that using a one-size-fits-all doubling of the manual action diagnosis and implementation time, or using any other specific multiplicative or additive factors, did not recognize the variability of the risk significance of some manual actions. Further, a couple of

comments suggested that ensuring that the manual actions had to be reliable (as opposed to feasible) went beyond current requirements for other actions, such as those related to using the emergency operating procedures.

Variables (Uncertainties)

COMMENT: Related to the time margin comments, a few comments cited concerns with regard to the variables (uncertainties) to be taken into account to ensure reliable performance of the manual actions. These comments stated that many of the variables (uncertainties) are already considered in the licensee's evaluation by such practices as assuming the worst case fire, specifically accounting for the uncertainty when meeting another acceptance criterion, or by meeting a specific requirement that is already specified elsewhere, such as sufficient lighting. There were no suggestions made by the public that the variables were inappropriate; however, some stated that many of the variables are addressed elsewhere in the analyses or tactics used by licensees.

Clarification of Terms

COMMENT: Comments were provided involving the clarification of a number of terms or phrases used in DG-1136, such as "dedicated" personnel and "prompt actions," as well as undefined terms, such as "excessive," "unduly," "reasonable calculations," "serious equipment damage," separation requirements related to fire areas, "manual actions," and the purpose of "preventive actions."

Miscellaneous Guidance

COMMENT: A few comments related to the fact that the recommended inclusion of specified guidance items in the procedures was not necessary and that some guidance items are pertinent to the fire brigade, but not the operations staff responsible for achieving and maintaining hot shutdown and, therefore, should not be included in DG-1136. In particular, comments suggested the following:

- Cautions about potentially hazardous conditions could be in prefire plans.
- Routes to and from locations where manual actions will be taken do not need to be in procedures.
- Some procedural or training guidance was applicable to fire brigades but not operations staff and need not to be part of this guidance document.

Analysis Criterion Guidance

COMMENT: A few comments related to the need to provide more criteria, or even prescriptive guidance, as to the acceptability of the analysis performed to determine whether the manual actions can be performed within the time available. For instance, there were questions with regard to the initial conditions to be assumed for the thermal hydraulic plant response, acceptable end states, how spurious operations should be treated, and the unnecessary fire modeling implied by the analysis criterion.