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Secretary,
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ATTN: Rulemakings and Adjudications Staff

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OFFICE OF SECRETARY
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ADJUDICATIONS STAFF

**STRATEGIC TEAMING AND RESOURCE SHARING (STARS)
COMMENTS ON PROPOSED RULEMAKING AND DRAFT
REGULATORY GUIDE;
Fire Protection Program – Post-Fire Operator Manual Actions
(RIN 3150 AH-54) (70 FR 10901)**

Gentlemen:

The Strategic Teaming and Resource Sharing (STARS)¹ nuclear power plants have reviewed the proposed rulemaking, draft regulatory guide (DG-1136), federal register notice (70 FR 10901) and the associated regulatory analysis regarding post-fire operator manual actions. The STARS plants endorse the comments provided by the Nuclear Energy Institute. In addition, specific STARS comments are provided below and in the enclosure to this letter.

The primary objectives of the proposed rulemaking, as stated in SECY-03-0100, "Rule Making Plan on Post-Fire Operator Manual Actions," are to:

- Maintain safety and increase public confidence by defining technically acceptable generic criteria for operator manual actions which can be used to assess the feasibility of existing or future operator manual actions employed by licensees,
- Provide an efficient and effective method using generic criteria for feasible operator manual actions that will provide quality and uniformity in licensee assessments and documentation of the acceptability of plant specific operator manual actions,

¹ STARS is an alliance of six plants (eleven nuclear units) operated by TXU Power, AmerenUE, Wolf Creek Nuclear Operating Corporation, Pacific Gas and Electric Company, STP Nuclear Operating Company and Arizona Public Service Company.

- Amend Appendix R and associated guidance to permit the use of feasible operator manual actions without the need for NRC approval to avoid unnecessary NRC and licensee regulatory burden and resource expenditure associated with exemption or deviation processing, and
- Amend Appendix R and associated guidance to permit the use of feasible operator manual actions to more effectively use resources of both licensees and the NRC with respect to resolving existing manual action compliance issues encountered during plant specific inspections.

STARS is concerned that the scope of the proposed rule has gone beyond these original objectives to the point where the proposed rule is now overly prescriptive, restrictive, and complex such that it requires a great deal of expense – with little or no increase in overall safety – to implement. Due to the prescriptive nature of the proposed rule and draft guidance, the above objectives will not be realized. Therefore, the proposed rule should be simplified, as suggested by NEI. The specific criteria for assessing operator manual actions should not be codified (consistent with other regulations), but should instead be provided in the proposed regulatory guide. These criteria should also be adjusted to eliminate the time margin and fire detection and suppression requirements, be made consistent with existing regulatory and industry guidance and consensus standards, and be risk-informed.

The criteria provided in the proposed rule and the draft regulatory guide regarding assessment of operator manual actions are not consistent with other NRC and industry guidance, such as Enclosure 2 to NRC Inspection Procedure 71111.05T, “Fire Protection (Triennial),” Generic Letter 91-18, “Resolution of Degraded and Non-Conforming Conditions,” Information Notice 97-78, “Crediting of Operator Actions in Place of Automatic Actions and Modifications of Operator Actions, Including Response Times,” ANSI/ANS 58.8, “Time Response Design Criteria for Safety Related Operator Actions,” and NEI 96-07, Revision 1, “Guidelines for 10 CFR 50.59 Implementation.” Nor is it consistent with how operator manual actions are evaluated and assessed in safety analyses of record for normal, abnormal, and emergency plant operations. The requirement for “time margin” represents a new staff position that will significantly increase regulatory burden on the NRC and licensees, without demonstrating a clear benefit in safety or overall reduction in risk. This requirement is redundant to the conservatism already provided in the factors used to evaluate whether or not an operator manual action is feasible. The basic premise of “time margin”, i.e., provide additional time over and above the already-conservative time allowances provided in the analyses to compensate for “unknown” effects, is unreasonable. Taken to the extreme, the only way to address all “unknowns” would be to include a time margin that is equivalent to the duration of the fire and placing the plant in a safe condition. Licensees will be forced to submit numerous exemptions due to this unreasonable expectation.

Furthermore, STARS is concerned that this proposed rule and guidance regarding operator manual actions will be used generically in the future to assess *any* operator manual action that may be credited or contemplated for any reason. Applying this proposed guidance generically, as it currently exists, would effectively nullify the existing NRC and industry guidance that has a demonstrated track record of being safe and effective, and that has been in use for many years.

Although the NRC staff has stated that this guidance will only apply to fire protection issues, the regulatory analysis implies that this guidance may be applied generically.

As stated by industry in the public meeting held on April 27, 2005, the proposed requirement of providing fire detection and suppression in the fire area will result in a significant cost burden to licensees, with little, or no, reduction in overall plant risk. This new staff position may, in fact, increase the overall risk to a plant due to the potential flooding effects and the possibility of spraying water on plant equipment that may otherwise remain functional. This requirement does not consider the actual or potential risk associated with the proposed operator manual action, or the risk of installing, maintaining, and potential operation/inadvertent operation of the suppression system. The STARS plants agree with Commissioner Diaz's comments documented in Commission Vote Record CVR-04-0233, "Proposed Rulemaking-Post-Fire Operator Manual Action (RIN 3150 AH-54)," regarding detection and suppression – "the requirement for fire detection and automatic suppression will significantly reduce the benefits of the proposed rule with respect to the underlying reason for undertaking the rulemaking (i.e., reducing the use of the exemption process and thereby allowing for more efficient use of resources by licensees and NRC)."

The STARS plants also agree with the comments provided by ACRS Member Stephen L. Rosen, as documented in ACRS letter to the Commission, "Draft Proposed Rule on Post-Fire Operator Manual Actions," dated November 19, 2004. The proposed rulemaking "misses an important opportunity to move the industry and NRC towards a more risk-informed, performance-based approach to the control of fire risk.

"As noted in the rulemaking plan attached to SECY 03-100, the staff has acknowledged that replacing a passive fire barrier or automatic suppression system with human performance activities can increase risk but for some simple operator manual actions, the risk increase associated with human performance may be minimal. The staff also stated that the introduction of feasible operator manual actions could result in a minimal increase in overall risk and has concluded (on a plant-specific basis) that the use of certain specific operator manual actions for the operation of co-located safe shutdown trains provides an adequate level of fire safety and satisfies the underlying purpose of the fire protection regulations."

The regulatory analysis for this proposed rulemaking 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. Thus the staff believes that use of unapproved manual actions (for all reactors) is typically a compliance issue and is not a significant safety issue." This staff position has been reiterated in other documents and in several public meetings held with industry representatives. STARS concurs with this position, but the proposed rule and draft regulatory guide are contrary to this position. The proposed rule and guide impose new staff positions, particularly with respect to fire detection and suppression and "time margin," that do not take into account the fact that the use of appropriate operator manual actions are not safety significant. The real issue is "compliance" – not nuclear safety. Therefore, simplifying the proposed rule as suggested by NEI effectively addresses the "compliance" issue, while recognizing the safety-significance associated with this rulemaking effort. Consistent with this

simplification, the draft regulatory guide should be revised as stated previously, or eliminated in its entirety.

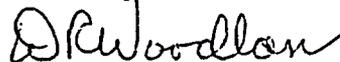
In summary, the STARS plants believe that the proposed rule and associated draft regulatory guide fall short of the original rulemaking objectives, and miss an important opportunity to introduce risk-informed and performance-based approaches into existing fire protection regulation. The proposed rule and guidance are inconsistent with existing NRC and industry guidance and practices for crediting operator manual actions. Implementation of the rule will result in greater burden on both the NRC and licensees, and possibly increase regulatory uncertainty, as licensees seek additional exemptions and deviations to credit new or existing operator manual actions. In addition, it is unclear how the draft regulatory guide will be applied to plants licensed after January 01, 1979. The STARS plants are concerned that the draft regulatory guide will become the "defacto" standard for both NRC fire protection inspections and NRC assessments of any credited or proposed manual operator actions.

The STARS plants concur with NEI's recommendations that the proposed rule should be simplified and the requirements for "time margin" and fire detection and suppression should be eliminated. STARS endorses NEI's comments on the proposed rule and draft regulatory guide, and provides more specific comments in the enclosure.

The STARS plants strongly encourage continued open dialog between key stakeholders and the NRC regarding this issue. STARS is confident that a regulatory solution may be achieved that is both balanced and effective, and that meets the original objectives of this rulemaking effort.

The STARS plants appreciate the opportunity to comment on this proposed rule. If there are any questions regarding these comments, please contact me at 254-897-6887 or dwoodla1@txu.com.

Sincerely,



D. R. Woodlan, Chairman
Integrated Regulatory Affairs Group
STARS

Enclosure

Enclosure to STARS-05003
Comments on Proposed Rulemaking and Draft Regulatory Guide:
Post-Fire Operator Manual Actions
DG-1136
RIN 3150 AH-54 70 FR 10901

Responses to Specific Request for Comments Published in the Federal Register Notice**Request for Comment 1: (Time Margin)**

The Commission requests opinions specifically on the time margin aspects because of stakeholder interest in this subject and the Commission's desire to consider all stakeholders' input for this important criterion. Specifically, the Commission asks the following questions:

(A) Considering the factors for time margin discussed above (including the conditional dependence on a worst-case demonstration meeting all the other acceptance criteria), should the time margin consist of a single multiplicative factor (e.g., 2 times), or a range of multiplicative factors (e.g., 2–4 times)? Please provide a technical basis for your proposed time frames or factors.

(B) If a range is appropriate, what should the range be and what parameters or variables should be considered in determining which part of the range is applicable in a given situation? Please provide a basis for your proposed time frames or factors.

(C) Should there be a minimum additive time (e.g., 10 minutes) for situations where the time in the demonstration is so short that a multiplicative factor would not properly account for the required time margin (e.g., a time in the demonstration of < 5 minutes). Please provide a basis for your proposed time frames or factors.

(D) Are there other means of establishing margin (e.g., through consideration of conservative assumptions in the thermal hydraulic timeline)? Please provide a technical basis.

STARS Response:

As stated in the cover letter, STARS is opposed to requiring any type of time margin factor. Imposition of this factor is inconsistent with current NRC and industry guidance, consensus standards, and industry practice regarding the evaluation and assessment of operator manual actions, not only in the area of fire protection, but in other areas, such as in the safety analyses, or when addressing degraded and non-conforming conditions. STARS is concerned that this action will set a precedent that will have a far-reaching impact for any existing or proposed operator actions that may be credited not only in the area of fire protection, but within these other areas as well. The time margin factor will essentially negate the existing NRC and industry guidance and practices, and possibly the analyses that licensees have already completed, to validate, credit, and implement operator manual actions – all at the expense of addressing a compliance issue that has little or no safety significance.

70 FR 10905 and 10906 provide the perceived factors necessitating the time margin factor: an adjustment to account for conditions that cannot be recreated in the demonstration that could cause delay, variability of fire and related plant conditions, and variability in human performance. The licensee's evaluation typically considers all of the variables identified in the Federal Register Notice and the draft regulatory guide (realistic environment, access, equipment, etc.) required to ensure that the action can be completed in the required time. Defense-in-depth

is provided by existing licensee programs that address such areas as training and qualification, operator physical fitness, and providing adequate plant procedures.

The time margin factor duplicates the conservatism already provided in the evaluations or analyses that licensees use to assess operator manual actions. The imposition of a time margin factor will result in licensees re-evaluating and revising their analyses to remove this conservatism because of this duplication – again, at significant cost and with no demonstrated safety or risk benefit.

Enclosure 2 to NRC Inspection Procedure (IP) 71111.05T, Fire Protection (Triennial), provides information to the NRC Inspector to assess the feasibility of operator manual actions in the area of fire protection. This enclosure provides ten criteria that are to be used to determine if an operator manual action is feasible, reliable, and safe. The enclosure does *not* have a “time margin” requirement – the verification and validation criterion simply states: “Ensure that the licensee has adequately evaluated the capability of operators to perform the manual action in the time available before the plant will be placed in an unrecoverable condition.” If the ten criteria of the enclosure to the IP are met, then the operator manual action has been determined to be acceptable, i.e., the action is reasonable, feasible, safe, and not risk-significant.

Information Notice (IN) 97-78, “Crediting of Operator Actions in Place of Automatic Actions and Modifications of Operator Actions, Including Response Times,” is another source of information that addresses how operator actions should be analyzed. STARS recognizes that the scope of this document could be construed to be limited to certain situations regarding operator manual actions. Upon closer inspection, though, one quickly recognizes that the criteria provided in this document are appropriate for assessing the appropriateness of any operator manual action, and these criteria are consistent with other regulatory and industry guidance for assessing operator manual actions. As stated in the IN, NRC reviews of licensee’s analyses typically include: 1. the specific operator actions required, 2. the potentially harsh or inhospitable environmental conditions expected, 3. a general discuss of ingress/egress paths taken by the operators to accomplish functions, 4. the procedural guidance for required actions, 5. the specific operator training necessary to carry out actions, including any operator qualifications to carry out actions, 6. any additional support personnel and/or equipment required by the operator to carry out actions, 7. a description of the information required by the control room staff to determine whether such operator action is required, including qualified instrumentation used to diagnose the situation and to verify that he required action has successfully been taken, 8. the ability to recover from credible errors in performance of manual actions, and the expected time to make such a recovery, and 9. consideration of the risk significance of the proposed operator actions. The requirements of this IN effectively address how operator actions – for any area under consideration – should be addressed. Implied in this IN is the fact that if these criteria are adequately addressed, then the proposed operator manual action is safe and not risk-significant. This statement is also true with respect to meeting the criteria provided in Enclosure 2 to NRC Inspection Procedure 71111.05T, Fire Protection (Triennial).

NRC staff has also stated in various documents provided in the public record that the introduction of feasible operator manual actions could result in a minimal increase in overall risk. The staff, however, also concluded - on a plant-specific basis - that the use of certain

specific operator manual actions still provides an adequate level of fire safety, and that the underlying purpose of the fire protection regulations continue to be met. This conclusion is the basis for granting approval to many of the exemption requests that involved manual operator actions. This approval typically did not include providing fire detection and suppression in the fire area, or the inclusion of "time margin factor" in the analyses.

Based on the fact that this rulemaking effort was undertaken to address what has been determined to be a compliance issue that is not safety-significant, and the information provided in this letter, the application of a "time margin factor" to address uncertainties is unwarranted. In addition, the existing regulatory and industry guidance documents regarding operator manual actions provide a more-than-adequate level of safety and protection. Therefore, STARS believes that the proposed rule should be simplified, and the criteria for time margin be eliminated, as suggested by NEI. The information provided in the regulatory guide should be revised such that it is consistent with other NRC and industry guidance, or should be eliminated in its entirety.

Request for Comment 2:

After considering the technical implications and historical background of the proposed criteria as discussed above, the Commission has tentatively decided that the proposed operator manual actions rulemaking should require fire detectors and an automatic fire suppression system in the fire area to permit operator manual actions as a compliance option under paragraph III.G.2, provided the acceptance criteria delineated in a new paragraph III.P are satisfied. The basis for the requirement is discussed above. However, because of the stakeholder interest in this subject, the Commission is asking for specific feedback and opinions from stakeholders on requiring an automatic versus fixed fire suppression system in the fire area.

The Commission asks the following specific question:

Under the proposed option of using operator manual actions under III.G.2.c-1, when redundant trains are located in the same fire area, should the requirement for a suppression system in the fire area be automatic or fixed? An automatic suppression system is required in III.G.2(b) and (c). However, a fixed system is specified in III.G.3. Provide the rationale for why requiring fixed or automatic suppression would provide the appropriate level of protection in the proposed paragraph III.G.2(C-1).

STARS Response:

STARS is opposed to the requirement to have detection and suppression (automatic or otherwise) in the fire area. This requirement represents a new staff position that requires substantial cost to implement, with little or no reduction in overall plant risk, and little or no increase in overall plant safety. In fact, a preliminary review of the overall risk impact performed by one of the STARS plants would indicate that overall risk may actually increase due to potential flooding effects and the possibility of spraying water on components that may otherwise remain functional. Preliminary cost and risk data for the industry were provided to the NRC during the April 27, 2005 public meeting – this data further supports STARS position.

Detection and suppression requirements for a subject fire area are typically determined by performing a fire hazard analysis for the fire area. This analysis may originally be performed by the Architect/Engineer for the facility. The analysis then typically receives additional reviews from the licensee's fire protection engineer, fire protection professionals from the licensee's insurance carrier, and fire professionals from various regulatory agencies, including NRC staff. These reviews ensure that the fire areas where significant fire hazards exist are adequately protected. These reviews provide an added layer of "defense-in-depth" for ensuring fire risk is minimized.

The proposed rule is attempting to provide a level of assurance equivalent to the protection provided by a three-hour barrier. This deterministic, and very prescriptive, approach ignores advances that have been made in the techniques used to evaluate fire behavior and risk since the original rule and Appendix R were promulgated more than 25 years ago. Given today's better understanding of fire behavior and risk, there is no reason that the proposed rule should be promulgated under the philosophy that existed at that time, especially when considering the *substantial* expense, with no or little overall safety or risk benefit, that will be required to comply with the proposed rule.

One of the overall objectives of a fire protection program is to maintain plant safety, and provide the ability to achieve and maintain safe shutdown in the event of a fire. To this end, licensees have generally implemented effective fire protection programs that have demonstrated performance in minimizing and mitigating fire events at nuclear power plants. The proposed rulemaking is an attempt to correct a regulatory compliance issue that has been recognized as having little or no safety significance. In addition, the regulator has granted exemption requests for various operator manual actions based on the fact that although the proposed actions represented a minimal increase in overall risk, implementing the action still provided an adequate level of fire safety and the underlying purpose of the fire protection regulations continued to be met – all without meeting the new staff position regarding detection and suppression proposed in this rulemaking. The detection and suppression (automatic or otherwise) requirement of this proposed rulemaking should be eliminated.

Request for Comment 3:

After considering a number of technical and regulatory implications, the Commission has tentatively decided to limit the applicability of this proposed rule on operator manual actions to paragraph III.G.2. However, because of the stakeholder interest in this subject, the Commission is also asking for specific feedback and opinions from stakeholders on applying operator manual actions acceptance criteria to paragraphs III.G.1 and III.G.3. Depending on the comments received, the Commission may extend application of the criteria to paragraphs III.G.1 and III.G.3.

The Commission asks the following specific question:

Should the operator manual action acceptance criteria developed for III.G.2 also be applied to operator manual actions for III.G.1 and III.G.3? Are there advantages or disadvantages not noted by the Commission that should be considered? Please provide a discussion outlining the basis for your response taking into account the considerations outlined in the supplementary information section of this document.

STARS Response:

The proposed rule should not be extended to III.G.1 and III.G.3 operator manual actions. Crediting operator manual actions under these paragraphs is a well-established practice that is based on sound NRC and industry guidance. Extending the proposed rulemaking guidance to these areas will result in significant regulatory burden on the NRC and industry for the same reasons that are provided above. In addition, crediting operator manual actions under these paragraphs does not seem to present the regulatory compliance issue that is associated with paragraph III.G.2, which is the focus of this proposed rulemaking. If any changes are to be made, they should be made to the proposed rulemaking and draft regulatory guide such that the proposed rule is simplified and the draft regulatory guide is revised to be consistent with existing regulatory and industry guidance regarding operator manual actions, or the draft guide is eliminated in its entirety.

General Comments

Plants Licensed after January 01, 1979 – The STARS plants are concerned that the requirements of the proposed rule and draft regulatory guide will become the “defacto” standard for future NRC fire protection inspections, proposed changes to existing fire protection programs, and to any future proposed operator manual action, regardless of whether or not the proposed action is associated with fire protection. Use of the draft regulatory guide in this manner is inappropriate, especially since this draft guide contains new staff positions that are above and beyond the guidance and consensus standards that are currently being used by the NRC and industry.

Plants Licensed after January 01, 1979 - Operator manual actions have either been reviewed and approved by the NRC during the initial licensing process, or they have been implemented under the standard license condition, i.e., the action has been determined to not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. It is unclear to the industry as to how the proposed rule and draft regulatory guide will be applied to newer plants.

Footnote 3 of 70 FR 10903 indicates that compliance depends on the specific licensing commitments (usually specified in license conditions for these licensees), the change control process, and how the change was justified and analyzed to demonstrate that the operator manual actions are feasible and reliable and thus do not adversely affect the ability to achieve or maintain safe shutdown. The draft regulatory guide represents the current staff position for how crediting manual operator actions are to be performed. As such, industry is concerned that the draft guide will become that standard for how NRC staff will review and assess operator manual actions that have been credited using the standard license condition. The draft guide presents new staff positions, and it is in direct conflict with how the industry believes operator manual actions should be credited. The draft guide should be revised to be made consistent with the guidance currently being used by the regulator and industry.

Draft Regulatory Guide – If this draft guide is going to be published, then the NRC must engage key stakeholders to revise the guide such that the information presented is consistent with existing regulatory and industry guidance and practice. It should also incorporate the state-of-the-art understanding of fire modeling techniques and risk insights. Furthermore, all of the new staff positions, including the two major positions already identified, must be addressed. These new positions include, at a minimum, expectations regarding staffing and training requirements, control of portable equipment, procedures, and demonstration requirements. The level of detail and the extensive, prescriptive and restrictive requirements of the draft regulatory guide are not commensurate with the actual, very-low, safety significance of the regulatory compliance issue that this effort has been undertaken to address.

Draft Regulatory Guide: Expert Elicitation – the elicitation process does not account for the inherent conservatism that is provided in the baseline (i.e., no “time margin factor”) analyses performed by licensees. The baseline analyses, if performed correctly and in accordance with existing NRC and industry guidance, includes margin that adequately address the areas of concern identified by the staff in a reasonable manner. In addition, the expert elicitation process appears to have applied probabilistic risk insights to assess failure rate, and to again adjust the time margin factor based on these insights. Again, the baseline analyses should have already considered the effects of incorrect/incomplete operator action and recovery time. Therefore, additional “time margin” should not be a consideration.

Draft Regulatory Guide: Expert Elicitation – While the qualifications and experience of the expert elicitation panel are impressive, STARS is disappointed that the panel did not include representation from the industry. The panel consisted of one NRC contractor, and five NRC employees. Stakeholder participation in this process could have added valuable insights as to how operator manual actions are evaluated.

Regulatory Analysis – The regulatory analysis should use the current labor rates identified in 10 CFR Parts 170 and 171.

General Comment – The STARS plants are concerned that the apparent changes in staff positions that are evident in the proposed rule and draft regulatory guide, when combined with the other current regulatory issues in the area of fire protection (some of which are discussed in the recently issued draft Regulatory Issue Summary, "NRC Regulatory Issue Summary 2005–XX; Clarification of Post-Fire Safe-Shutdown Circuit Regulatory Requirements"), will result in an environment where compliance with the requirements of 10 CFR 50, Appendix R, will be extremely difficult to achieve. An integrated approach to addressing these issues must be undertaken by the staff and key stakeholders since these issues are not mutually exclusive.

NOTE: Most of the comments provided above are purposefully general in nature to demonstrate the fact that the proposed rulemaking and draft regulatory guide are overly prescriptive and complex. The STARS plants strongly encourage the NRC staff to engage key stakeholders to develop a greatly simplified proposed rule that addresses the existing regulatory compliance issue, while recognizing the very-low safety significance associated with this issue. Consideration should be given to revising, at a minimum, the draft regulatory guide such that it does not impose numerous new staff positions and expectations, and such that it is consistent with existing regulatory and industry guidance. The need for this draft regulatory guide should be re-evaluated based on the comments received from key stakeholders and the public during this public comment period.