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**DOCKET NUMBER**  
**PROPOSED RULE PR 50**  
**(70 FR 10901)**

DOCKETED  
USNRC

May 24, 2005 (4:11pm)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

**MAY 23 2005**

Secretary, U.S. Nuclear Regulatory Commission  
Attn: Rulemaking and Adjudications Staff  
Washington, DC 20555-0001

**SUSQUEHANNA STEAM ELECTRIC STATION**  
**COMMENTS ON PROPOSED CHANGE**  
**TO THE FIRE PROTECTION PROGRAM**  
**(RIN 3150 AH-54)**  
**PLA-5902**

**Docket Nos. 50-387**  
**and 50-388**

On Monday, March 7, 2005, in Vol. 70, No. 43 of the Federal Register, the U.S. Nuclear Regulatory Commission (NRC) published a proposed rule for comments regarding the Fire Protection Program – Post-Fire Operator Manual Actions.

The purpose of this letter is to provide PPL Susquehanna, LLC (PPL) comments on the NRC Proposed Rulemaking for Manual Actions under Appendix R Section III.G.2. PPL endorses the industry comments provided by the Nuclear Energy Institute (NEI) and, in addition, is providing a site specific perspective on the rulemaking.

PPL's comments relate to two aspects of the proposed rulemaking.

1. Our first area of concern relates to the requirement for fire area wide automatic suppression and detection in those fire areas where a fire induced circuit failure results in the need to perform a manual action.
2. Our second area of concern relates to the requirement for time margin studies for manual actions.

Each of these areas of concern are considered to be new requirements that alter the previous NRC position and practice related to the use of manual actions in support of post-fire safe shutdown. In addition, each of these areas of concern will require a significant level of expenditure in order to achieve compliance. In neither case, however, do we see a commensurate level of improvement in safety or reduction of risk that would warrant the expenditures anticipated.

Template = SECY-067

SECY-02

### Area Wide Automatic Suppression and Detection:

The PPL Fire Protection Program is based on the concept of defense-in-depth (DID). The components of this DID program are: (1) Preventing fires from starting; (2) Rapidly detecting and suppressing any fires that do start; (3) Providing passive fire protection features to prevent fire spread and damage. This DID program is also supplemented by a post-fire safe shutdown analysis that demonstrates the ability to achieve and maintain post-fire safe shutdown in the event of a fire in any plant fire area.

Fire Hazards Analyses are used to identify areas where fire hazards exists and where suppression and detection are necessary to mitigate the potential effects of fires. These analyses were prepared as a part of the initial licensing of Susquehanna and were reviewed by:

- Fire Protection Personnel from Bechtel Power Corporation, the Architect Engineer responsible for initial plant design,
- Fire Protection Personnel from PPL,
- Fire Protection Personnel from the Insurance Carrier for the plant on numerous occasions, and
- Fire Protection Personnel from NRC (NRR and the Region) on numerous occasions.

Recommendations from each of these groups have been incorporated into the design of the plant's fire protection features. Based on the reviews conducted and the changes made over the course of time, the plant is configured such that the areas where fire hazards exist are protected with suppression and detection. Conversely, those areas where suppression and/or detection have not been provided, are areas where there is no fire hazard that could threaten the safe shutdown of the units.

The Proposed Rulemaking on Manual Actions would require that suppression and detection be provided throughout any fire area where a manual action in support of post-fire safe shutdown was credited. This requirement would lead PPL to provide full area suppression throughout its largest fire areas in the Unit 1 and Unit 2 Reactor Buildings. The fire areas in these buildings extend through eight (8) individual floor elevations. This would be necessary even though the current Fire Hazards Analysis concludes that full area suppression is not required on many of these floor elevations. The estimated cost, based on standard industry information for design and installation of suppression systems, is in the excess of \$10.0 million without a commensurate safety improvement or reduction in risk.

### Time Margin Studies:

The PPL DID Fire Protection Program is aimed at assuring that plant equipment is not damaged by fires. The PPL philosophy related to safe shutdown in the event of a plant fire is that the DID Fire Protection Program will assure that damage to equipment required for safely shutting down the plant will not be damaged by a plant fire. In the unlikely event that fire induced equipment damage does occur, however, the post-fire safe shutdown analysis protects or assures the ability to operate equipment which the Emergency Operating Procedures will instruct the operator to use. As a result, the Operator in the Control Room will shut down the plant in the event of a fire using the same symptom based procedures that he/she uses for any other plant event.

It is our belief that the DID Fire Protection Program will preclude the need to even shut down the plant for the vast majority of fires, but if a fire does force a plant shutdown much more equipment than protected in the post-fire safe shutdown analysis will be available. The Control Room Operator, through the Off Normal Procedure for Fires, is warned of the potential need for specific operator actions in each fire zone. The expectation, however, is that any such impacts are not likely to occur and any that do occur will be accomplished individually in conjunction with the symptom based response.

The time margin studies required by the Proposed Rulemaking on Manual Actions, conversely, assume that plant fires will damage multiple pieces of plant equipment with the potential to adversely affect post-fire safe shutdown. The time margin study requirements further assume that the actual timing of the fire damage to the equipment can be accurately predicted. [Note: This assumption is contrary to all experience with actual fires. Actual fire experience is, in fact, what caused the industry to develop the conservative DID approach to plant fire protection that currently exists.]

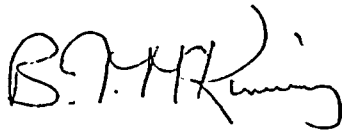
Introducing this time element into the requirements for post-fire safe shutdown analysis presents a concern for PPL, since predicting the timing of actual fire damage to equipment required for post-fire safe shutdown will, out of necessity, involve the use of engineered assumptions. These engineered assumptions, although conservative, will not accurately predict actual damage states resulting from actual fires. The conclusions of the engineering analysis based on these engineered assumptions will need to be included in post-fire safe shutdown procedures for the plant.

The outcome of this exercise will be an engineered event based response to the fire condition. This event-based response to the fire condition will conflict with the symptom based response used in the EOPs. PPL considers the introduction of an event based response to fires to be in potential conflict with the symptom based response used in the EOPs.

**Conclusion:**

It is PPL's position that the NRC should adopt the alternative wording provided by NEI on behalf of the industry as opposed to the wording currently contained in the proposed rulemaking for manual operator actions.

If you have any questions on this response, please contact Mr. Dayne Brophy at (570) 542-3365.

A handwritten signature in black ink, appearing to read "B. T. McKinney". The signature is written in a cursive style with a large initial "B" and a long, sweeping underline.

B. T. McKinney

Copy: NRC Region I  
Mr. A. J. Blamey, NRC Sr. Resident Inspector  
Mr. R. V. Guzman, NRC Project Manager  
Mr. R. Janati, DEP/BRP