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BWR OWNERS' GROUP

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BWROG-8527

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United States Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

Attention: H. Denton

Subject: ANTICIPATED TRANSIENTS WITHOUT SCRAM
TECHNICAL SPECIFICATIONS 10CFR50.62

In evaluating the alternatives for compliance with the NRC rule on Anticipated Transients Without Scram (ATWS), 10CFR50.62, the BWR Owners' Group has looked at the potential impact of the rule on existing Plant Technical Specifications. The impact of the ATWS rule is subject to interpretation since specific requirements are not provided for plant technical specifications. The degree of technical specification changes, if any, required under the rule can significantly affect the total cost of the options available for complying with the rule. In particular, if two Standby Liquid Control System (SLCS) pumps are to be used to meet the 86 gpm equivalency requirement and the Limiting Condition for Operation were to allow operation for some period less than the seven days currently specified when one of the two SLC system pumps is inoperable, additional possible shutdown costs would need to be considered. Licensees would most likely be forced to choose potentially more costly alternatives such as two full capacity pumps or enriched boron because of the shutdown costs. This potential cost increase is causing delays for many licensees in selecting an option and moving forward with a detailed design. It is for this reason that the BWR Owners' Group is submitting this letter which provides the position of the Group on the impact of the ATWS rule on Technical Specifications. It is submitted to the NRC for review and concurrence.

The issuance of the ATWS rule brought to close the question of the adequacy of the reactor protection and reactivity control systems. It provided for augmentation of an already highly reliable design giving multiple levels of defense for bringing the reactor to a safe shutdown condition. Following implementation of the ATWS modifications on boiling water reactors several mechanisms for bringing the reactor to cold shutdown will be in place. The normal means of shutdown will be by control rods inserted on command by the reactor protection system. Under the Technical Specification improvement effort of the BWR Owners' Group the high reliability of this system was determined as reported in Topical Report NEDC-30844 which is currently under review by the NRC staff. Should the Reactor Protection System fail to automatically insert the control rods the operator has the capability to manually

initiate insertion. In the unlikely event of the scram valves failing the back-up scram valves provide an additional means of bleeding air off the scram header to cause insertion of the control rods. In addition, the Emergency Procedure Guidelines have been structured to provide the operator with instructions on how to solve problems and achieve control rod insertion should a partial or complete failure to scram occur. The next lines of defense are the Recirculation Pump Trip (RPT) and Alternate Rod Insertion (ARI) systems. The RPT will reduce the reactor power and the ARI provides an additional means of bleeding air off the scram header to cause insertion of the control rods. Finally, should all these levels of defense fail, the operator has the Standby Liquid Control System available for use to inject boron into the core and achieve a safe shutdown condition.

It is the BWR Owners' Group position that because of the reliability of the normal Reactor Protection System and the additional levels of defense provided by the back-up scram valves, RPT and ARI, the existing technical specifications in place at each plant for the Standby Liquid Control System are adequate. The current Limiting Conditions for Operation do not present an undue risk to the health and safety of the public and should remain as currently specified. The surveillance test requirements and frequency of these provide reasonable assurance of the reliability of this system and should remain as currently specified. Those portions of the technical specifications and Final Safety Analysis Report which describe physical characteristics of the SLC system will be changed as appropriate for the modifications selected in complying with the ATWS rule.

The design basis for those systems impacted by the ATWS rule continues to be as contained in the individual licensee's Final Safety Analysis Report. System operability continues to be defined as the ability to meet the design basis prior to the issuance of the ATWS rule.

These positions are supported further by the Statements of Consideration for the ATWS rule. These are the same arguments which resulted in the requirements as specified in the rule. The ARI and RPT systems and the SLC system modifications required by 10CFR50.62 are not safety related. In addition, requirements normally applied to safety related systems and equipment, such as redundancy, divisional separation of power (safety related, 1E), and full seismic and environmental qualification, do not need to be included in ATWS equipment design as specified in the rule.

In summary, the non-safety related systems required by the ATWS rule are only necessary should several tiers of a defense in depth approach fail. The normal reactor protection system with back-up scram valves is highly reliable. The currently specified Limiting Conditions of Operation, and surveillance test requirements and frequencies provide an adequate level of assurance of system operability, assuring an acceptable level of protection to the health and safety of the public. Therefore, the technical specifications should not be modified with more stringent requirements than are currently specified. Each utility will include required operating, maintenance and surveillance instructions in their plant procedures. Only specific changes that may affect existing Technical Specifications need be incorporated to assure that the Technical Specifications are based on the modified system.

To allow licensees to meet the required date for submittal of schedules for compliance with the rule (October 13, 1985), an NRC position on SLC Technical Specifications must be formulated. In order to facilitate meeting this date we request your review of the positions contained in this letter no later than August 15, 1985.

This letter has been endorsed by a substantial number of BWROG members; however, it should not be interpreted as a commitment of any individual member to a specific course of action. Each member must formally endorse the BWROG position in order for that position to become the member's position.

Very truly yours,

John M Fulton

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