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**To:** <nrcprep@nrc.gov>  
**Date:** Fri, Oct 14, 2005 5:05 PM  
**Subject:** BWROG RG 1.97 Committee - Comments on DG-1128

Attached are comments from the BWR Owners' Group RG 1.97 Committee on DG-1128.

Karen Dunbar for  
 Jim Kenny  
 BWROG RG 1.97 Project Manager

*8/25/05*

*70FR49953*

*(1)*

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# BWR OWNERS' GROUP

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Project Number 691

BWROG-05022  
October 14, 2005

Rules and Directives Branch  
Division of Administrative Services  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
Attention: G Tartal

**SUBJECT:** Draft Regulatory Guide DG-1128 (Proposed Revision 4 of Regulatory Guide 1.97)

**ATTACHMENT:** BWR Owners' Group Comments to DG-1128

Dear Mr. Tartal:

The Boiling Water Reactor Owners Group (BWROG) appreciates the opportunity to comment on the subject Draft Regulatory Guide (RG) that is intended to become Revision 4 of RG 1.97. The subject Guide describes an acceptable method for use in compliance with regulations for accident monitoring instrumentation based on the provisions described in IEEE Std. 497-2002. The BWROG endorses the use of IEEE Std. 497-2002 as Revision 4 of RG 1.97 and considers it to be an improvement over Revision 3 of RG 1.97. Attached are comments we offer to DG-1128 which includes suggested changes to enable existing plants to effectively use the provisions of IEEE Std. 497-2002.

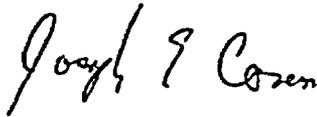
We agree with the NRC's conclusions that the prescriptive nature of Revision 3 of Regulatory Guide 1.97 has become outdated and does not provide criteria for advanced instrumentation system designs based on modern digital technology. IEEE Std. 497-2002 provides guidance which is performance-based criteria for the selection and design of variables to provide the accident monitoring functions of the individual variables. More importantly, it will align the selection of variables with the plant accident analysis and emergency operating procedures (EOPs).

The subject Guide notes that it is intended for new nuclear plants but that licensees of current operating reactors may voluntarily convert their accident management program to the criteria in the revised guide. Regulatory Position C.1 states, "If a current operating reactor licensee voluntarily converts to the criteria in Revision 4 of this guide, the licensee should perform the conversion on the plant's entire accident monitoring program to ensure a complete analysis."

We agree that a complete analysis should be performed of the entire set of accident monitoring variables program using Revision 4 of to RG 1.97 as part of a conversion process from Revision 3 of to RG 1.97, but believe flexibility is needed in implementation of provisions especially with respect to requiring modifications to accident monitoring instrumentation which meet existing regulatory requirements. BWR Owners with existing plants will be considering upgrading digital technology replacements to their existing accident monitoring system components and should be encouraged to use IEEE Std. 497-2002 as part of a planned upgrade of accident monitoring capabilities over time. The existing plants should be allowed to make conversions to the new guide on a specific variable or set of variables basis to accommodate on-going digital upgrades in the industry. Included in the attached are the proposed changes to Regulatory Position C.1 that we believe meets the intent of performance of a complete analysis and will permit on-going plant upgrades to utilize the improved criteria in the revised guide.

Attached are additional comments on the subject Draft Regulatory Guide. If you have questions about this information, please contact me at 734-586-1960.

Sincerely,



Joseph Conen  
BWR Owners' Group Chairman

cc: Dr. Brian W. Sheron, NRR  
Mr. Michael E. Mayfield, NRR  
Mr. Christopher L. Grimes, NRR  
Mr. Bhalchandra Vaidya, NRR  
BWROG Primary Representatives

ATTACHMENT  
BWR OWNERS' GROUP COMMENTS  
DRAFT REGULATORY GUIDE DG-1128

The BWR Owners' Group offers the following comments to Draft Regulatory Guide DG-1128 titled "CRITERIA FOR ACCIDENT MONITORING INSTRUMENTATION FOR NUCLEAR POWER PLANTS" dated August 2005.

**Regulatory Position C.1**

Regulatory position C.1 imposes an unnecessarily restrictive requirement by requiring a plant's entire accident monitoring program to meet the requirements of revision 4 of the regulatory guide during a voluntary conversion of a current operating reactor to the new criteria. It is agreed that the analysis of variables should cover all variables. However, the design and qualification criteria should recognize the acceptability of the plant's current licensing basis. For example, the electrical separation requirements specified in section 6.3.d of IEEE Std. 497-2002 require use of IEEE 384-1992. Current licensees meet electrical separation requirements per the current licensing basis of the plant but do not meet IEEE 384-1992. There is no benefit in requiring licensees to justify deviations from IEEE 384-1992 and in requiring NRC review of these deviations when voluntarily converting to revision 4 of the accident monitoring regulatory guide. Therefore, it is suggested that regulatory position C.1 be revised to read, "If a current operating reactor licensee voluntarily converts to the criteria in Revision 4 of this guide, the licensee should perform the conversion by evaluating all accident monitoring variables. When alternate requirements applicable to a design or qualification criteria are provided in the plant's current licensing basis, it is acceptable to apply these requirements to the voluntary conversion."

**Regulatory Position C.3**

Suggest deleting the term extended range from IEEE Std. 497-2002 section 4.3 in lieu of the proposed wording in C.3. Section 5.1 of IEEE Std. 497-2002 addresses the range for Type C variables, which includes requirements imposed by the plant License Basis Documents (LBD) that would include extended range considerations. Alternatively, we suggest revising to ....shall consider a damaged core and be capable of surviving....

**Regulatory Position C.4**

We believe the statement contained in IEEE Std 497-2002 Clause 4.1 and Clause 1.3 concerning contingency actions not being within the scope of the Standard should be retained. Removal of this statement will not capture that plant emergency operating procedures (EOPs) for BWR Owners include contingency actions which go beyond the plant's licensing basis. BWR Owner Emergency Procedure Guidelines which are the basis for plant EOPs are symptom based and have incorporated strategies based on existing plant systems and accommodate use of any available instrument indications

regardless of safety classification or inclusion in the plants licensing basis. The NRC agrees that such contingency actions would be the basis for elimination of certain instruments but the inclusion of the statements as provided by the IEEE Std. will avoid interpretation issues with respect to EOPs.

### **Regulatory Position C.6**

We agree with the NRC's statement concerning need for NRC approval but request that the section on Codes and Standards (Clause 2. "References" in IEEE Std 497-2002) be modified to allow use of current plant licensing basis Codes and Standards.

### **Requested Additional Change**

IEEE Std. 497-2002 Clause 5.4 c) should be modified to remove "shall be at least 100 days" and replaced with "shall be the duration for which the measured variable is required by the plant's LBD". In NRC's letter dated February 20, 2004 from Jose Calvo in response to the Nuclear Utility Group on Equipment Qualification letter dated October 22, 2003 it is noted that the post accident operating time varies depending on when a plant was licensed and thus should not be established as 100 days for Type C variables which monitor fission product barriers.