

NRCREP Resource

From: BELL, Denise [dxb@nei.org] on behalf of RILEY, Jim [jhr@nei.org]
Sent: Friday, February 20, 2009 5:48 PM
Subject: on Draft Regulatory Guide DG-1190, "Manual Initiation Of Protective Actions"
Attachments: 02-20-09_NRC_Comments on Draft Regulatory Guide DG-1190.pdf; 02-20-09_NRC_Comments on Draft Regulatory Guide DG-1190_Enclosure.pdf

February 20, 2009

Rulemaking, Directives, and Editing Branch
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

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Subject: Comments on Draft Regulatory Guide DG-1190, "Manual Initiation Of Protective Actions," Vol. 73, No. 247 Federal Register 78856 (December 23, 2008).

Project Number: 689

On December 23, 2008, the NRC issued a Federal Register Notice (Vol. 73, No. 247, page 78856) soliciting public comments on DG-1190, "Manual Initiation of Protective Actions". This draft regulatory guide is a proposed revision 1 of Regulatory Guide 1.62, dated October 1973.

This guide describes a method that the staff of the NRC considers acceptable for use in complying with the NRC's regulations with respect to the means for manual initiation of protective actions provided by otherwise automatically initiated safety systems.

A number of the additions proposed are inconsistent with guidance found in the referenced standards and the SRP, and do not reflect recent staff and industry discussions regarding defense-in-depth and diversity evaluations and human factors considerations coming out of the Digital I&C Task Work Group activities. This draft guide should reflect the guidance from these other regulatory guidance documents.

The Nuclear Energy Institute (NEI) has solicited comments from the industry and takes this opportunity to emphasize some of the more significant comments (enclosed).

If there are any questions regarding these comments, please contact me at 202.739.8137; jhr@nei.org or Gordon Clefton at 202.739.8086; gac@nei.org.

Sincerely,

James H. Riley

Enclosure

James H. Riley

E-REDS = ADM-03
add = K.H. Nguyen (khn)

SUNSI Review Complete
Template = ADM-013



James H. Riley
DIRECTOR
ENGINEERING
NUCLEAR GENERATION DIVISION

February 20, 2009

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Sincerely,

A handwritten signature in black ink that reads "James H. Riley".

James H. Riley

Enclosure

c: Ms. Tanya M. Mensah, NRR/ADRO/DPR/PSP, NRC

Comments/Recommendations

Location	Comment	Recommendation
<p>Section B. Discussion Current Text: ... individual means should also be provided to implement manual initiation at the plant component level since manual initiation for each appropriate plant system component (e.g., start pump, open or close valve) is subsequently required to provide (1) the completion of the safety function and (2) high functional reliability for the protective system as set forth in GDC 13 and GDC 21 of Appendix A to 10 CFR Part 50.</p>	<p>Component level manual control is a new requirement that goes beyond IEEE-279/603 and beyond the scope of this Regulatory Guide. IEEE-279/603 requires only system level controls, not component level controls. It is for the initiation of each protective action, not for completion of the protective action. The title and scope of this Regulatory Guide also pertain only to manual initiation of the protective action, not completion of the protective action.</p> <p>High functional reliability, as set forth in GDC 13 and 21, is achieved through safety functions that comply with the requirements of IEEE-279/603, including compliance to quality, qualification and single failure criteria. Manual controls are not required to achieve high reliability for safety functions.</p>	<p>The requirement for component level manual control should be eliminated or revised. This paragraph should be replaced with the requirements found in Section 6.2 of IEEE Std 603.</p>
<p>Section B. Discussion Current Text: Protective actions selected to be controlled manually are subject to consideration of (1) the time available to the operator to analyze and manually respond to an adverse condition, normally 30 minutes unless specifically justified...</p>	<p>A 30 minute prerequisite for manual control is a new requirement that goes beyond IEEE-279/603. The determination of whether a protective action should be controlled manually or automatically is the result of the human factors engineering process. The function allocation process considers numerous factors including time available based on the safety analysis and time required based on numerous HFE factors such as available indications and alarms, task complexity, task frequency, other concurrent tasks and control room staffing.</p>	<p>The 30 minute reference should be eliminated.</p>

Comments/Recommendations

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<p>Section B. Discussion ... these manual controls and indications must consist of safety-related devices ... dedicated to specific safety divisions.</p>	<p>Manual controls dedicated to specific safety division is a new requirement that goes beyond IEEE-279/603. There is considerable industry precedence for system level manual initiation pushbuttons that actuate reactor trip and ESF functions for all divisions concurrently; these exist at both CE and Westinghouse plants. In addition, ISG-04 (Digital I&C Interim Staff Guidance on communications) allows multi-division safety related workstations. As long as the manual controls meet the single failure criteria (i.e. no single failure shall prevent credited manual control of the safety function), there is no reason to restrict controls to a single division. Compliance to the single failure criteria can be assured with redundant multi-division safety related pushbuttons or redundant multi-division safety related workstations, where each redundant device is independently powered, physically separated and electrically isolated from the other.</p>	<p>Rewrite the text to comply with existing guidance.</p>
<p>Section B. Discussion This Regulatory Guide focuses on criteria for safety-related equipment or systems and does not address diverse manual-initiation equipment that is not classified as part of a safety system.</p>	<p>It is more appropriate to state that this Regulatory Guide focuses on criteria for compliance with the credited manual control requirements defined in IEEE-279/603, rather than manual controls that are part of the safety system. This is because a supplier/licensee may elect to provide safety related controls for compliance with position 4 of BTP 7-19 or safety related controls for other functions not required by IEEE-279/603. If those controls are not credited for compliance with IEEE-279/603, it would not be appropriate to extend this regulatory guidance to those controls.</p>	<p>Rewrite the text to comply appropriately limit the scope.</p>
<p>Section B. Discussion 2nd paragraph on page 4</p>	<p>The paragraph should be expanded to reflect the context of the referenced section of IEEE Std 603.</p>	<p>Reword the second sentence adding the following (additions are in <i>italics</i>) - Clause 5.6.3.1 of IEEE Std 603-1991 specifies that <i>interconnected</i> equipment that is used for both safety and non-</p>

Comments/Recommendations

Location	Comment	Recommendation
		safety functions shall be classified as part of the safety systems" <i>up to isolation devices provided to effect the safety system boundary.</i>
<p>Section C. Discussion Position 1 - Individual means should also be provided for manual initiation of each plant system component ...</p>	<p>Component level manual control is a new requirement that goes beyond IEEE-279/603 and beyond the scope of this Regulatory Guide. IEEE-279/603 requires only system level controls, not component level controls. It is for the initiation of each protective action, not for completion of the protective action. The title and scope of this Regulatory Guide also pertain only to manual initiation of the protective action, not completion of the protective action.</p>	<p>This requirement should be deleted.</p>
<p>Section C. Discussion Position 4 - In the case of automated digital protection systems, the point at which the manual controls are connected to safety equipment should be downstream of the plant's digital I&C safety system outputs.</p>	<p>This requirement is applicable to the diverse automated and manual controls credited for accident mitigation with a concurrent CCF in the digital safety systems, per BTP-19. The manual controls credited for compliance with IEEE-279/603 are not required to be downstream of the plant's digital safety system outputs, as long as a CCF of these manual controls is considered in the BTP-19 analysis. Position 5 is sufficient to ensure manual controls are implemented with sufficient simplicity.</p>	<p>The last two sentences of Section C, Position 4 should be deleted</p>