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STANDARDS OFFICE

DIRECT NUMBER
212 644-1960

April 15, 1981

Division of Human Factor Safety
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

ATTENTION: R. W. Froelich

Dear Dick:

The IEEE Working Group (WG) 5.5 Human Factors has reviewed an Advance Copy of NUREG-0659, Staff Supplement to the Human Engineering Guide to Control Room Evaluation Draft Report. Due to the short time available for review, the WG is providing general comments. Sufficient time was not available to review, analyze and synthesize detailed comments developed by individual WG members. It is anticipated, however, that most of these detailed comments will be submitted by WG members individually or as part of their organization's response.

The consensus of WG 5.5 is that changes presented in NUREG-0659 reflect a major improvement in NUREG/CR-1580. Many of the problems of 1580 were addressed and many of the proposed changes appear reasonable.

The WG believes, however, that certain sections within NUREG-0659 require attention. Appendix B is considered to contain paragraphs that are too vague. The workload analysis (page B-24, paragraph 4.3.2.6), for example, would be difficult to implement based on the description provided. The functional analysis (page B-14, paragraph 4.1) of the nuclear plant also would be difficult to accomplish based on the material contained in 0659.

The WG suggests that the introduction in the checklist section (page III-1, paragraph 1) contain a paragraph addressing the importance of considering both systems and human factors knowledge in surveying and measuring control room designs. As an example, an adequate evaluation of mimic boards and graphic panels (page III-25, paragraph 6.5.4.1) requires an understanding of the plant processes



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Page 2

and their relationships, together with knowledge of human factors considerations. If the systems knowledge is not included in the assessment, the result will be a control board with a reasonable "cosmetic" appearance, but not necessarily with the best possible presentation of process relationships.

WG comments submitted to the NRC in review of NUREG/CR-1580 were not included in NUREG-0659. It is recommended that these comments be addressed prior to issuing NUREG-0700. The WG will resubmit the 1580 comments, if requested.

The WG feels strongly that NUREG-0700, when implemented, will have a major impact on the nuclear industry. Because of the time involved in performing the actions required, and the cost, it is likely that the industry will resist repeating or extending analyses and actions that might be added to 0700 following its issue. The WG believes that the NRC has a responsibility to provide the nuclear industry with as complete and valid a document as possible in NUREG-0700. Therefore, the WG recommends that adequate time be provided for the industry and interested parties to review and comment on draft NUREG-0700 before it is formally issued. We realize that adequate time for review and to make modifications that might result from such a review may delay 0700. But the WG is of the opinion that it is more important to have the best possible document than to meet a July deadline for issuing 0700.

Please contact me if additional information is required from the WG.

Sincerely yours,

L. F. Hanes

L. F. Hanes, Chairman
WG 5.5 Human Factors

dp

cc: R. Allen
J. Penland
WG 5.5 Members