

Jb4/21/08

**Human Factors Engineering-related Requests for Additional Information for  
MHI Topical Report MUAP-07006-P (R1)  
“Defense-In-Depth and Diversity”  
July, 2007**

1. Page 37, section 7.2.4, “Human Diversity” – Please explain what is meant by the sentence, “The design person for the DAS is different from the design person for the PSMS and PCMS.”
2. Page 41, section 7.14, “Guideline 14: Manual Operator Action” – Please explain what is meant by, “The DAS provides diverse analog data processing and **HSI for at least one key variable for each critical safety function.**” What criteria are used to determine if one or more variables are needed to establish diversity for a critical safety function? Also, is there a distinct HSI for each variable related to a critical safety function or a distinct HSI for each critical safety function?
3. Page, 44, section “Manual Action Analysis Method” - Please explain what is meant by the statements, “In addition, all manual actions credited in the D3 Coping Analysis are included in the HFE Program described in the HSI System Topical Report. This program includes these actions in Human Reliability Analysis and HSI Validation using a dynamic high fidelity simulator.” Specifically, where in section 5.6, “Human Reliability Analysis,” of Topical Report MUAP-07007-P (R1), is an explanation/analysis of credited manual actions for the D3 Coping Analysis included?