

# REQUEST FOR ADDITIONAL INFORMATION 731-5624 REVISION 5

4/14/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 07.01 - Instrumentation and Controls - Introduction

Application Section: Branch Technical Position 7-14, Guidance on Software Reviews for Digital Computer-based Instrumentation and Control Systems

QUESTIONS for Instrumentation, Controls and Electrical Engineering 2 (ESBWR/ABWR Projects) (ICE2)

07.01-33

10 CFR 50, Appendix B, Criterion III, "Design Control," requires in part that quality standards be specified and that design control measures shall provide for verifying or checking the adequacy of design. Criterion V, "Instructions, Procedures, and Drawings," requires in part that activities affecting quality shall be prescribed by "documented. . . procedures. . . of a type appropriate to the circumstances. . . ." Branch Technical Position (BTP) 7-14 of the Standard Review Plan outlines such procedures for the basic software.

In Section 2.0, Program Overview, the Basic Software Program Manual, JEXU-1012-1132, Rev. 2, states the SPM uses the term "phase" to describe the activities within the life cycle development whereas BTP 7-14 uses the term "activity group." Possibly, this is an acceptable exception to the staff and should be noted as such. However, these phases are not consistent with 1) the BTP 7-14 "Life Cycle Activity Groups" and 2) "phases" are not consistent throughout the Basic SPM. The staff requests MHI to address the issue of 1) consistency with BTP 7-14 Activity Groups and; 2) consistency within the SPM itself.

- 1) As it states, BTP 7-14 "is generally based on the regulatory basis and guidance" and standards (Section A.2) that MHI may be referring to in Section 2.0. However, this BTP presents the specific acceptance criteria "supplemented as appropriate for attaining the required safety functions." Therefore guidance in the Planning Activities of BTP 7-14 is what will be used by the staff for SPM reviews and what MHI should use. Planning Activities are not described in a similar "phase" in the SPM. Also, combination of activity groups into a "phase" should be thoroughly explained.
- 2) "Phases" within the SPM should be reviewed to more completely explain the differences in each section. Sections 2.2, 3.0 and 3.1.1.3, as examples, identify different phases in terms of descriptions and numbers of phases.