DRAFT REQUEST FOR ADDITIONAL INFORMATION CQVP 388 REVISION 0

June 18, 2008

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 14.02 - Initial Plant Test Program - Design Certification and New License Applicants

Application Section: 14.2 Initial Plant Test Program

CQVP Branch

QUESTIONS

14.02-***

RG 1.68, Section C.1, Criteria for Selection of Plant Features To Be Tested, Item (d), notes that structures, systems and components (SSCs) classified as engineered safety features (ESFs) should be tested. US-APWR DCD Section 14.2.1 lists the categories of items to be tested and includes the engineered safety feature actuation system (ESFAS) rather than the full ESF systems. MHI needs to revise Section 14.2.1 to include testing of all systems that comprise ESFs for the US-APWR design.

(BNL RAI 14.2-1 Part A)

14.02-***

Please add "10 CFR 52.47(b)(1)" to US-APWR DCD Section 14.2.1 since it is applicable to design certification applications.

Please update the reference to 10CFR 52.47(a)(1)(vi) in DCD Section 14.2.1. Since 10 CFR has been recently amended, please confirm that the references to 10 CFR in Section 14.2 of the DCD are current.

Please add RG 1.163, Performance-Based Containment Leak-Test Program, to US-APWR DCD Table 14.2-2.

Table 14.2-2 includes RG 1.9 for "Selection, Design, and Qualification of Diesel-Generator Units Used as Onsite
Electric Power Systems at Nuclear Power Plants." Please clarify the applicability of this RG to the US-APWR, since the
US-APWR uses gas turbines instead of diesel generators.

(BNL RAI 14.2-2)

14.02-***

RG 1.68, Item C.4 and App. C, Item 1.f, Acceptance Criteria, note that the test acceptance criteria should account for measurement errors and uncertainties used in the transient and accident analyses. US-APWR DCD Section 14.2.3.5 does not specifically address this provision. Please indicate how test acceptance criteria will account for measurement errors and uncertainties used in the transient and accident analyses in DCD Section 14.2.3.5.

(BNL RAI 14.2-4)

14.02-***

RG 1.68, Section C.4, Procedures, states that "Approved test procedures for satisfying FSAR testing commitments should be made available to the NRC approximately 60 days prior to their intended use." This is noted in DCD Section 14.2.3. DCD Section 14.3, COL item 14.2(7), notes that the COL applicant provides a schedule for development of procedures that assures procedures are available for testing. Please modify COL item 14.2(7) to indicate that approved test procedures for satisfying FSAR testing commitments will be made available to the NRC approximately 60 days prior to their intended use.

(BNL RAI 14.2-6)

14.02-***

US-APWR DCD Chapter 14.2.12, Individual Test Descriptions, provides a listing of tests and a brief summary of each test. DCD Section 14.2.1 notes that the preparation of test procedures is the responsibility of the COL applicant. DCD Section 14.2.13 documents COL items related to the initial test program. COL 14.2(3) requires the COL applicant to provide the process used to develop test specifications and test procedures. MHI needs to clarify the objective of this COL information item and specify whether the COL applicant will be responsible for preparing the test specifications and test procedures.

(BNL RAI 14.2-7)

14.02-***

RG 1.68, Section C.3, Scope, Conditions and Length of Testing, states "The testing of SSCs should include, to the extent practical, simulation of the effects of control system and equipment failures or malfunctions that could reasonably be expected to occur during the plant's lifetime." US-APWR DCD Section 14.2.1.2.2 mentions failures and malfunctions, but does not include the scope of "reasonably be expected to occur during the plant's lifetime."

Please expand the scope of Section 14.2.1.2.2 of the DCD to address how the testing of SSCs will include, to the extent practical, simulation of the effects of control system and equipment failures or malfunctions that could reasonably be expected to occur during the plant's lifetime. (BNL RAI 14.2-1 Part B)