

**REQUEST FOR ADDITIONAL INFORMATION NO. 190-1764 REVISION 0**

2/9/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 14.03.02 - Structural and Systems Engineering - Inspections, Tests, Analyses, and  
Acceptance Criteria  
Application Section: DCD, Tier 1 - Section 2.2

QUESTIONS for Construction Inspection and Allegations Branch (CCIB)

14.03.02-2

ITAAC Item 1 in Table 2.2-4

The design commitment, ITA, and AC should refer to 'each PS/B' not 'the PS/B'.

The AC should refer to 'as-built structural configurations' not 'as-build design configurations'.

For the AC the reference to 'descriptions' is only applicable to the Table 2.2-2 not the figures. The figures are only horizontal and vertical layouts of the R/B and each PS/B.

14.03.02-3

ITAAC Item 3 in Table 2.2-4

Why does the AC not state that the results of the SIT conformed to the ASME Code, Section III, and the PCCV retains structural integrity at 115% of the rated design pressure of 68 psig? The test pressure has to be 115% of design pressure, but the design commitment does not state a certain design pressure just design pressures under 68 psig.

14.03.02-4

ITAAC Item 5 in Table 2.2-4

Why do the design commitment and AC not state that the PCCV is Seismic Category I and can withstand seismic design basis loads without loss of safety function?

This would be applicable to other similar ITAAC for other buildings like the following:

ITAAC Item 6 in Table 2.2-4

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14.03.02-5

ITAAC Item 9.a in Table 2.2-4

This ITAAC is concerned with the location of divisional flood barriers in the R/B and in each PS/B. Why do the design commitment and AC not refer to the actual locations of the flood barriers based on rooms or refer to a figure or table where the locations of the flood barriers are identified?

This question is also applicable to following ITAAC:

ITAAC Item 9.b in Table 2.2-4 for locations of water-tight doors.

ITAAC Item 10 in Table 2.2-4 for locations of penetrations.

ITAAC Items 13.a and b in Table 2.2-4 for locations of flood barriers.

14.03.02-6

ITAAC Item 11 in Table 2.2-4

The design commitment and AC are concerned with the electrical and I&C equipment being located so as to be protected against design basis floods. However, their words appear to be incomplete sentences in that they can not be understood. The design commitment should be revised to state something similar to the following: 'Safety related electrical, instrumentation, and control equipment **listed in Table XXXX or in Buildings Y and Z** are located to protect **them from the** design flood.' The AC should state something similar to the following: 'The as-built safety-related electrical, instrumentation, and control equipment **listed in Table XXXX or in Buildings Y and Z** are located at sufficient height **above** the floor surface to protect **them from** the design flood.'

This question is also applicable to following ITAAC:

ITAAC Item 12 in Table 2.2-4 - Why do the design commitment and AC not state how thick the external walls of the R/B and each PS/B are in order to protect against water seepage instead of just stating wall thickness and sufficient wall thickness? There is no measurable quantity stated that can be inspected.

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14.03.02-7

ITAAC Items 13.a and 13.b in Table 2.2-4

This question is written on this particular ITAAC, but it applies in general to all ITAAC for this application.

All ITAAC should be numbered consecutively. These two ITAAC do not appear to be a singular ITAAC with individual items a and b, but two ITAAC that are independent of each other. If there is one design commitment and multiple ITA and AC, then that is a singular ITAAC in which the individual ITA and AC may have different designations to identify them.

Typically for this system of identifying each ITAAC by a number, then the individual ITA and AC, if there are more than one of each, could be labeled with some letter designation in order to identify each of them.

Whatever numbering system is utilized, it has to be consistent.

This ITAAC is also applicable to the following ITAAC:

ITAAC Items 9.a and 9.b in Table 2.2-4

14.03.02-8

ITAAC Item 14 in Table 2.2-4

The design commitment is more definitive than the AC. The AC establishes the criteria which ensures that the design commitment is met. The AC should be more definitive than the design commitment or the same as it.

For example, the AC could be stated identical to the design commitment.

This question is also applicable to the following ITAAC:

ITAAC Item 15 in Table 2.2-4 - In addition, should the ITA for this ITAAC also include an analysis in addition to the inspection?