

## REQUEST FOR ADDITIONAL INFORMATION 505-4030 REVISION 2

12/15/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 09.05.08 - Emergency Diesel Engine Combustion Air Intake and Exhaust System  
Application Section: 9.5.8

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

09.05.08-23

Subsection B.3.3 of the "Qualification and Test Plan of Class 1E Gas Turbine Generator System" (MUAP-07024-P) states that the allowable ambient air conditions for the GTG include a temperature range of -20°C to 50°C, or -4°F to 122°F. According to DCD Table 2.0-1, Key Site Parameters, the ambient design air temperatures for the US-APWR are -10°F (1% exceedance) and -40°F (0% exceedance). These design temperatures should be reconciled.

09.05.08-24

Subsection B.3.3 of the "Qualification and Test Plan of Class 1E Gas Turbine Generator System" (MUAP-07024-P) states that the allowable ambient air conditions for the GTG include a level of "foreign matters in the intake air" of less than 10µm. This size particulate can be contained in windblown dust. RAI 09.05.08-19 requested that the applicant justify the removal of the combustion air intake filter from the GTG design, but did not reference this manufacturer's design requirement. The justification provided for RAI 09.05.08-19 should also address compliance with this design requirement.

09.05.08-25

The MHI response to RAI 09.05.08-16 included a new statement to be added to DCD Tier 1, Subsection 2.6.4.2, that describes the protection provided for the turbine intake and exhaust openings above the roof of the power source building. There are also roof-top openings for the building/GTG cooling air inlet and exhaust that must also be protected from natural phenomena to ensure their safety function. The description should be revised to include the provisions for the cooling air inlet and exhaust openings against natural phenomena.

Reference: MHI's Response to US-APWR DCD RAI No. 321 (321-2271), MHI Ref: UAP-HF-09295, dated June 9, 2009, ML091630626.