

## REQUEST FOR ADDITIONAL INFORMATION 703-5458 REVISION 2

2/28/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 08.03.01 - AC Power Systems (Onsite)

Application Section: 8.3.1

QUESTIONS for Balance of Plant Branch 1 (SBPA)

08.03.01-39

MHI's letter of December 28, 2010, transmitted Revision 0 of Technical Report MUAP-10023, "Initial Type Test Result of Class 1E Gas Turbine Generator System," dated December 2010. This test report does not appear to address the impact of variable intake air temperature and other ambient conditions on GTG performance, other than on the ability to start. The tests were performed at the prevailing ambient conditions, including average intake air temperatures ranging from 56F to 81F. However, the US-APWR GTGs are rated for operation up to 115F. Since increasing intake air temperatures cause a reduction in GT output, the test report should include a description of and the results of an analysis using methodology similar to that described in Section 5.4 of the ASME "Performance Test Code on Gas Turbines," PTC 22, which demonstrates that the GTGs will meet the rated output at the design ambient conditions (temperature, humidity, and atmospheric pressure, as applicable) using the manufacturer's published performance curves. The test report should also address any potential impact of variable design ambient conditions on the ability to meet the other GTG performance requirements for load rejection, load acceptance, margin, etc., included in this test program.