

REQUEST FOR ADDITIONAL INFORMATION 716-5527 REVISION 2

3/16/2011

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 06.03 - Emergency Core Cooling System
Application Section: 6.3

QUESTIONS for Reactor System, Nuclear Performance and Code Review (SRSB)

06.03-98

Per teleconferences in December and January, MHI indicated that the test rig used for housing the mock fuel assembly during the GSI-191 in-vessel downstream effects testing included a gap between the assembly and test wall equal to the full gap between two adjacent assemblies in the core. This would in effect increase the bypass area available around the assembly and therefore the test results do not support a safety justification.

Provide additional justification to demonstrate that the limits associated with GSI-191 in-vessel downstream effects are not violated.

06.03-99

Technical Report MUAP-10021, "US-APWR Core Inlet Blockage Test," Appendix C provides details regarding a fiber-only bypass strainer test that was conducted. Appendix B of Technical Report MUAP-08001, "US-APWR Sump Strainer Performance," provides some description and photos of the test itself.

1. The photo in MUAP-08001 appears to show some debris suspended on the surface. Provide an assessment of the proportion of debris that was floating on the surface and its impact on the test results.
2. The method used in the test appears to be the same method as was used for the sump strainer testing (except for the exclusion of the particulates and chemicals). The sump strainer test was designed to minimize the debris bypass, whereas the bypass only test should maximize the debris bypass. Provide justification as to why this is conservative for developing the fiber bypass source term for downstream in-vessel effects testing.