

REQUEST FOR ADDITIONAL INFORMATION
US-APWR Topical Report: LBLOCA Code Applicability, MUAP-07011-P(R0)

06/17/10
Mitsubishi Heavy Industries
Docket No. 52-021
SRSB Branch

The following is a Request for Additional Information (RAI) based on the NRC's confirmatory analysis associated with the review of the US-APWR Topical Report – Large Break LOCA Code Applicability MUAP-07011-P(R0). This RAI will be referenced as the third set of RAIs for this Topical Report.

LBLOCA Confirmatory Analysis RAI:

Please provide plotted data for: (1) PCT, (2) fuel rod gap conductance, (3) fuel rod gap width, (4) fuel centerline and surface temperatures, and (5) fuel cladding inner surface temperature at the limiting core location covering the period from 0 to 100 seconds in the WCOBRA/TRAC LBLOCA reference case run. Provide an explanation for the trends and magnitudes of the behavior seen in those plots relative to the various WCOBRA/TRAC fuel rod models documented in WCAP-16009-P-A Section 7-3 and the fuel and fluid conditions in the region during that period. Of particular interest are explanations relative to the onset of cladding heat-up, the cladding heat-up and cooldown rates, and the causes for the blowdown and reflood cladding temperature maxima.