REQUEST FOR ADDITIONAL INFORMATION MUAP-07010, MUAP-07011, AND MUAP-07013

03/17/2009

US-APWR TOPICAL REPORTS

Mitsubishi Heavy Industries, Inc.

Docket No. 52-021

SRSB Branch

The following are the NRC requests as were discussed at the February 10, 2009 meeting with MHI regarding the MARVEL-M and M-RELAP5 code reviews, and the confirmatory analyses for SBLOCA, LBLOCA and Non LOCA Topical Reports:

1. Description and software (either provide or identify commercial source) to generate plotted output from MARVEL-M results. Provide method and directions for retrieving plot data from MARVEL-M binary output file.

2. Electronic copies of the input files for MARVEL-M analysis corresponding to:
    a. Uncontrolled RCCA bank withdrawal at power.
    b. Partial loss of forced reactor coolant flow.
    c. Complete loss of forced reactor coolant flow.
    d. Reactor coolant pump shaft seizure.
    e. Main steam line break (hot zero power with offsite power available).

3. Please provide access to M-RELAP5 source code and PC executable. This will be used exclusively by the NRC and its contractor (ISL) in support of the M-RELAP5 code review.

4. For the following two bullets, please provide the requested information if it is available in English (or some combination of English/Japanese). If the referenced material is solely written in Japanese, provide a listing of these items so that we can later decide which items may need to be translated into English.

    - Documentation for M-RELAP5 SBLOCA US-APWR plant model - preferably a model development notebook. This will be used to aid in understanding the basis for the plant model that was developed (NRC and ISL will return to MNES Arlington on April 22, 2009 to review this material).

    - Documentation (calculation notebooks) for the specific limiting SBLOCA, LBLOCA and Non-LOCA cases. Currently plans are to evaluate all limiting cases presented in the DCD for the SBLOCA, the limiting LBLOCA case in the DCD (including all parametric selections used for that case), the MSLB non-LOCA cooldown limiting case in the DCD (including hot zero power initialization and reactivity feedback effects), the loss-of-load non-LOCA limiting heatup case in the DCD and a SGTR transient. This information is requested to facilitate setting up the confirmatory RELAP5/MOD3.3 models.