

# REQUEST FOR ADDITIONAL INFORMATION 402-3028 REVISION 0

6/18/2009

US-APWR Design Certification

Mitsubishi Heavy Industries

Docket No. 52-021

SRP Section: 11.03 - Gaseous Waste Management System  
Application Section: 11.3

## QUESTIONS for Health Physics Branch (CHPB)

### 11.03-12

In response to the Staff's question (RAI 164-1925, Question 11.02-7; RAI 189-2006, Question 11.03-6) to provide the basis for all values and assumptions used in the PWR-GALE code calculation of expected liquid and gaseous effluent releases MHI states,

"Reactor coolant leak rate to the containment for noble gases: 0.0002/d this value is determined by the ratio of 10 gpd described in DCD Table 11.2-2 and the reactor coolant mass of 646,000 lb (along with a unit conversion)." And, "... this value is integrated in the PWR-GALE program code, the code has been modified to reflect the parameter."

The Staff requests the Applicant to:

1. Provide the "unit conversion" mentioned and its basis.
2. Justify the reactor coolant leak rate of 0.0002/d for noble gas releases from containment. Include the basis (e.g., operational data) for an expected leakage rate value of 10 gpd inside containment (to containment sump).
3. Provide information on the modified PWR-GALE code to include:
  - a. An executable copy of the modified code and a printout of the source code.
  - b. Identify all modifications made to the code and the specific lines of source code changed.
  - c. QA/QC performed on the modified code.
  - d. Other documentation to support use of the modified code.

### 11.03-13

Several inputs to the PWR-GALE code in regards to treatment provided for removal of airborne iodine and radioactive particulates from gaseous effluents in ventilation exhaust are identified as "None" or "0".

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The Staff requests the Applicant to:

1. Justify the exclusion of the following items in the design:
  - a. Gas waste system (no HEPA filter installed)
  - b. Auxiliary building (no HEPA and charcoal filter installed)
  - c. High volume purge exhaust system (no charcoal filter installed)
  - d. Containment atmosphere internal cleanup system and filtration